

MOSS GM / Atlas BX Pilot

Guide for Participants

This document is being distributed for review by stakeholders in the GM / Atlas BX supply chain. Please provide comments to the Pilot Project Leader, Michael Comerford, GM / Global Commerce Inc., michael.comerford@usgcs.com. Arrangements for the training of stakeholders are being made.

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1 Executive Summary

This document describes procedures for managing a supply chain from Atlas BX (supplier) to a GM Spare Parts Organization (customer) using the MOSS (Materials Off-Shore Sourcing project) recommended practice and the TradeMerit software. For each role in this supply chain the document provides step-by-step procedures for using the TradeMerit software.

The goals of the MOSS project are to reduce buffer stock inventory, expedite and transit time variation in automotive supply chains. In order to achieve these goals, MOSS defined a recommended best business practice and corresponding EDI message structures for the management of the information driving long-distance supply chains. MOSS will:

- standardize the messages employed in long-distance supply chains,
- harmonize the encoding of information exchanged in messages,
- standardize and improve the effectiveness of the paper documents used to drive the supply chain by deriving these automatically from the equivalent messages, utilizing MOSS eDoc specifications.

The MOSS solution was motivated from a study that revealed that 15% of shipments are delayed en-route due to errors in the information used to manage the supply chain.

The scope of MOSS is the intercontinental transport of goods via ocean from the foreign supplier to the U.S domestic ship-to party. All MOSS recommendations are based upon open global standards. This, in turn, will lay the foundation for future MOSS-related work to include outbound-to-foreign trade lanes and foreign-to-foreign lanes.

Prior to the MOSS Pilot, MOSS conducted two proof-of-concept exercises which provided the participating technology providers a unique opportunity to evaluate portions of the draft recommendation in the context of their software systems. The tools provided on the NIST MOSS work site (<http://syseng.nist.gov/moss>) assisted in the task of implementing the recommendation, and in the assessment of conformance to the recommendation.

Proof-of-concept Exercise 1 included limited data in messages DELJIT, DESADV and INVOIC and the production of a PDF eInvoice. Exercise 2 was a continuation of Exercise 1 and concerned the conformance of technology provider tools to the messages IFTMBF, IFTMIN, IFTMCS, IFTMAN, and CUSCAR.

As planned, the proof-of-concept exercises will now be followed by a comprehensive Pilot exercise which will demonstrate interoperability across stakeholders in the intercontinental supply chain. The Pilot will include all MOSS messages and all data used by stakeholders.

When conducting a “pilot” many different testing scenarios are possible. MOSS elected to engage in the most robust type of pilot testing: conducting the test in parallel to real-time / live shipments. This, we determined, would provide the optimal testing conditions for our recommendations.

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The participating application provider, TradeMerit, will provide access to their web-based supply chain management system. TradeMerit's participation in the proof-of-concept exercises demonstrated that their system is MOSS-capable. In the pilot, a business process reflecting the MOSS recommendation will run in parallel to current state processes. Ideally, the MOSS solution will demonstrate the ability to:

- Eliminate or significantly reduce data re-keying.
- Eliminate or significantly reduce the use of paper, phone, fax, and email as communication mediums,
- Eliminate or significantly reduce the incidence of deficient or missing Invoices for cross-border transportation purposes, and
- Provide real-time visibility into the goods transit and dwell movements

MOSS identified where (in what task and message) each unit of information is introduced into the supply chain process, and where that information is reused in down-stream processes. Using this knowledge, it is envisioned that the re-keying that is prevalent in current state processes can be eliminated. The MOSS harmonization of data encoding will enable re-use of data across stakeholders. Additionally, by re-using the agreed upon data in agreed upon formats, the use of phone, fax, email and paper in supply chain processes can be replaced with less error prone messaging.

Finally, MOSS will demonstrate the use of the INVOIC message and the generation of standardized paper invoices on-demand for cross-border transportation purposes. Missing or deficient invoices were cited as among the most common reasons for shipment delays.

2 Time Line

The following table describes the milestone events and dates for the GM / Atlas BX Pilot, and a follow-on European Pilot.

Week	KR-US Pilot Trade Lane – FCL	DE-US Pilot Trade Lane – FCL and LCL
2009-12-15	<ul style="list-style-type: none">• Review TradeMerit/MOSS software.• Identify possible connectivity issues.	
2009-12-22	<ul style="list-style-type: none">• Refine TradeMerit/MOSS implementation of Pilot Exercise 1.• Develop training and reference materials for pilot participants• Resolve connectivity issues (if any) with participant's systems.	
2009-01-19	<ul style="list-style-type: none">• Refine TradeMerit/MOSS implementation of Pilot Exercise 1• Develop training and reference	

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	materials for pilot participants • Resolve Connectivity Issues	
2009-01-26	• Train participants • Test connectivity	
2009-02-02	• Train participants • Test connectivity	
2009-02-09	• Commence KR - US Pilot, Week 1	
2009-02-16	• Continue KR - US Pilot, Week 2	• Preparations for DE-US trade lane MOSS Pilot, which includes FCL & LCL consolidations and deconsolidations
2009-02-23	• Continue KR – US Pilot, Week 3	• Review TradeMerit/MOSS software • Identify connectivity issues
2009-03-02	• Continue KR – US Pilot, Week 4	• Refine TradeMerit/MOSS system • Develop training and reference materials for participants • Resolve any connectivity issues
2009-03-09	• Continue KR – US Pilot, Week 5	• Train participants • Test connectivity
2009-02-16	• Continue KR – US Pilot, Week 6	• Train participants • Test connectivity
2009-03-23	• Evaluate KR – US Pilot, including cost/benefit analysis	• Commence DE - US Pilot Week 1
2009-03-30	• Management decision to deploy MOSS solution in KR – US trade lane. Expand to other suppliers. Make adjustments to process, extend pilot, etc.	• Continue DE - US Pilot Week 2
2009-04-06		• Continue DE - US Pilot Week 3
2009-04-13		• Continue DE - US Pilot Week 4
2009-04-20		• Evaluate DE – US Pilot including cost benefit analysis

3 GM / Atlas BX Pilot Overview

3.1 Goals

The goals of the MOSS project are to reduce buffer stock inventory, expedites, and transit time variation in automotive supply chains. The MOSS solution was motivated from a study that revealed that 15% of shipments are delayed en route due to errors in the information used to manage the supply chain.

The MOSS Pilot Activity implements the MOSS solution with technology from TradeMerit, Inc. The purpose of this document is to describe how the TradeMerit software will be used to manage a GM supply chain from a Korean supplier of batteries, Atlas BX, to a GM Spare Parts Organization (SPO) in Kansas City, Mo. Initially, the MOSS solution will run in parallel with the current process that GM is using in this supply chain.

This document first describes the general idea by which the new process operates, and how the TradeMerit software supports that process. It then provides specific guidance to users of the TradeMerit software in each of the following roles in the process: Customer (GM SPO), Supplier (Atlas BX), Materials Manager (CEVA Logistics), Ocean Carrier (APL), Freight Forwarder (DHL/Exel), and Customs Broker (CEVA/Eagle).

3.2 Pilot Software Technology

3.2.1 Overview

In the MOSS project we discovered two principal problems that make providing an efficient supply chain difficult. The first problem is that the “channel” through which information about the supply chain flows, that is, the paper, phone calls, faxes, and EDI messages, is error prone and inefficient. The second problem is that establishing that channel is costly. There are good reasons why one supply chain differs from another, but there are no good reasons for how difficult it is to establish one. Making the arrangements by which the parties communicate with each other, and identify what they need to communicate to keep things moving, is unnecessarily difficult.

MOSS solves the first problem in part by defining the information requirements of the EDI messages driving the process. That will not be discussed here. MOSS solves the second problem, and provides support for a solution to the first problem, using the TradeMerit software.

The problem with supply chains that grow up over long periods of time, out of basic necessity and the nearest handy communication medium, (typically paper documents and the telephone) is that they miss their opportunities for optimization across the steps of the process. Instead of a “clean break,” each new requirement is addressed by adding an additional notify party, an additional document transfer, a phone call, etc. until things become quite complex, invisible, and costly. See *Illustrations* Error: Reference source not found and 2.

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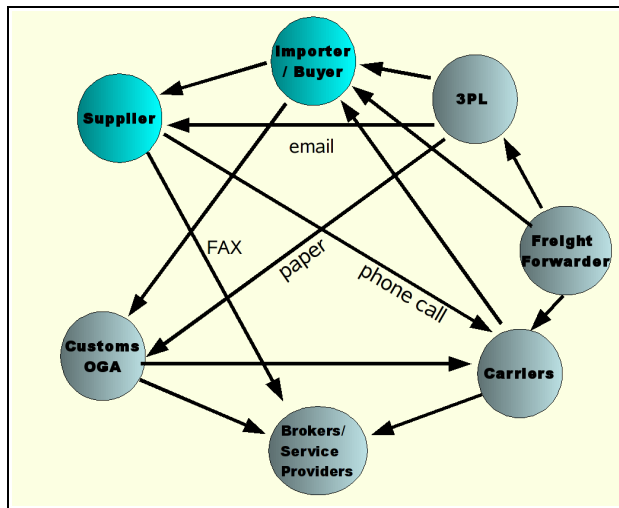


Illustration 1: Current Process

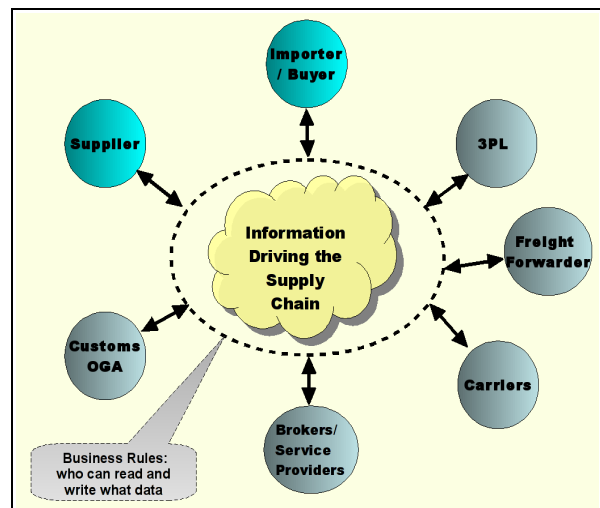


Illustration 2: The MOSS Approach

The way things are done now is depicted in *Illustration 1*. There are many ad hoc information channels. Parties often get notifications second hand.

In *Illustration 2* the cloud represents a central place for all the critical information (information we call the “MOSS Properties”). By centrally managing this information and by notifying stakeholders of its introduction as required by their need, the cost of configuring the communication channel is greatly reduced. Stakeholders should note that it is not necessary that all information about the supply chain is stored in a central place, only the information that MOSS has identified as essential to the supply chain process. It is likely that every party has a back-end system that contains some of the same information as that maintained in the central location.

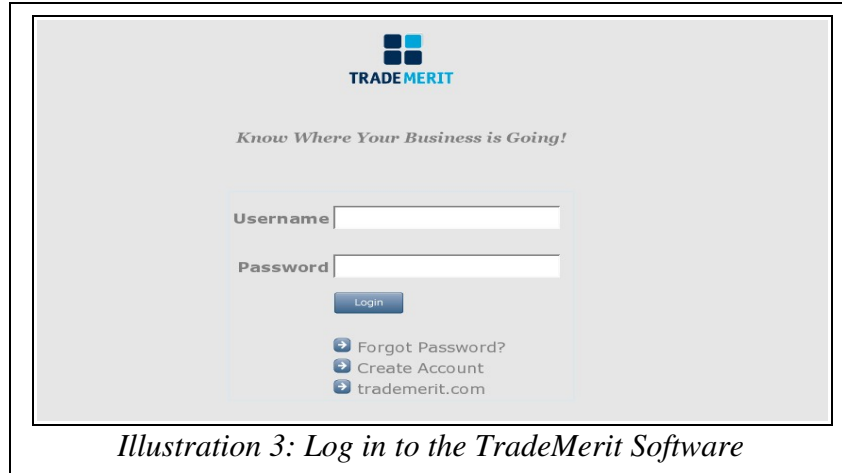
In *Illustration 2*, the balloon “Business Rules: who can read and write what data” refers to the need for a policy by which rights and restrictions are imposed on access to shipment information. These rights and restrictions are most efficiently stated in terms of the business process and roles within the business process. Defining the business process and the responsibilities of each role are tasks at the heart of our solution to the second problem – the cost of configuring the supply chain. It must be possible to configure the supply chain without great expense, and a description of the business process must be available to all stakeholders, so that they may validate it. A finding of the MOSS project is that it is common that no stakeholder knows the complete process of the supply chain.

In the Pilot project, we use the TradeMerit software to define, cost-effectively, the business process, business roles, and the responsibilities of roles. The TradeMerit software provides a notion of *shipping plan* that allows the configuration of roles and responsibilities in the supply chain process. This topic is covered in greater detail in *Section 4.2.1*. Users should note that designing shipping plans is not a daily activity. However, the plan is used directly by the TradeMerit software to conduct the flow of the supply chain business process.

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3.2.2 Browser Interface

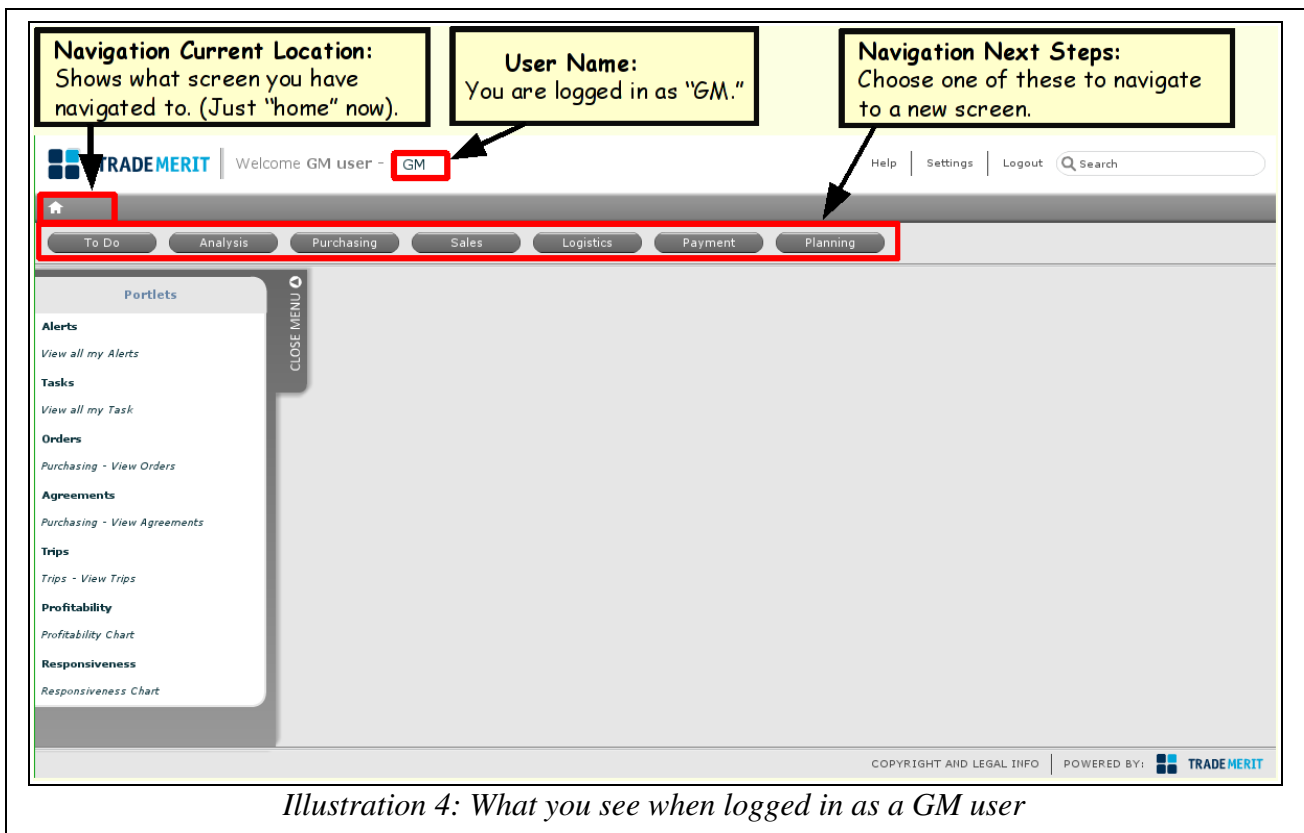
In the Pilot exercise, the cloud and the dotted oval in *Illustration 2*, labeled “Information Driving the Supply Chain,” are provided by the TradeMerit software. The TradeMerit software is deployed as “Software as a Service,” that is, none of the parties need to install any software on their computers. It runs on web servers at TradeMerit, in the US. You reach the software by going to the website <https://service.trademerit.com>, where you will see a screen like this:



For the pilot, login user names have been set up for GM, Atlas, Eagle and Exel. Login names look similar to these: smith@gm.com, jones@atlas.com, johnson@eagle.com and collins@exel.com. Though these example names look like email addresses, that is just a coincidence. The part before the '@' is a user's name, and the part after it is the user's organization.

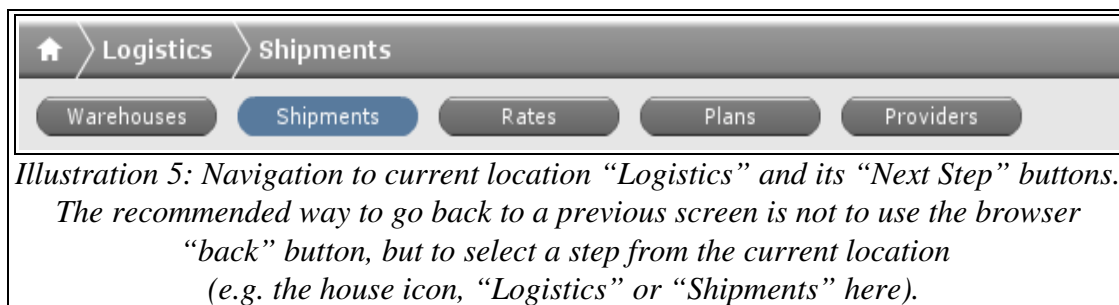
When you log in to the system you will see a screen similar to this:

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You will be logged in to the "Home" screen, where the "Navigation Current Location" only shows a small house icon.

The "Navigation Next Steps" area shows all the things that you can do from wherever you have navigated to. If you are logged in as the customer party, (as we are here, as GM) then the Navigation Next Steps area from the home shows many Next Steps ("To Do" "Analysis" etc.). If you are logged in to another role (say, a freight forwarder) there won't be as many Next Steps, because some of the activities (like "Purchasing" above) are not relevant to your organization. If I choose "Logistics" from the Navigation Next Steps, the Navigation Current Location and Navigation Next Steps will then look like this:



The list of action buttons in the Navigation Next Steps area has updated to the actions relevant to

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Logistics.

Most of the screen is used for the Menu Area and Work Area. The appearance of these vary from screen to screen, but there are two basic styles used in the Work Area: the “spreadsheet style” as depicted in *Illustration 6* below, and the “sub-area form” depicted in *Illustration 7*.

Menu Area:
This area shows actions that can be applied to the current work area.

Work Area:
This area can take many forms.

Shipper #	Shipping Plan	Creation Date	Due Date	Despatch Date	Delivery Date	Status	Current Location	Attachment
11746	AtlasBX Batter...	7:28AM 05/12/...	7:28AM 31/12/...	7:32AM 05/12/...		In Transit	Los Angeles	
11834	AtlasBX Batter...	11:07AM 05/12/...	11:07AM 31/12/...			Ready	HQ	
11870	AtlasBX Batter...	4:27PM 05/12/...	4:27PM 31/12/...	4:48PM 05/12/...		In Transit	Factory	
11927	AtlasBX Batter...	7:49AM 11/12/...	7:49AM 06/01/...			Ready	Los Angeles	

4 total records

Illustration 6: The “spreadsheet style” work area and menu area of Home > Logistics > Shipments.

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The screenshot displays the TradeMerit web application interface. At the top, the header includes the TradeMerit logo, a welcome message for 'GM user', and navigation links for Help, Settings, and Logout. Below the header, a breadcrumb trail shows the path: Purchasing > Master PO > AtlasBx-2008 > Location. A sub-header bar contains the text: Master PO: AtlasBx-2008 Seller: AtlasBX Buyer: GM Incoterm: FCA. The main content area is divided into three tabs: Location (selected), Shipping Plan, and Inventory. On the left, there is a sidebar with an 'Actions' section containing 'Open' and 'Edit Location' buttons, and a 'Configuration' section. The main content area is titled 'Location' and contains two focus areas. The first focus area, 'Summary', lists the following details: Issuer (GM), Trade Agreement (AtlasBx-2008), and Shipping Plan (AtlasBX Batteries FCL). The second focus area, 'Location', lists the following details: Location (KansasWarehouse), CountryCode (UNITED STATES), CountrySubdivision (Missouri), City (Kansas City), Street (1491 N. Universal), and PostalZone (64129). Red asterisks are placed next to the fields for Issuer, Trade Agreement, Shipping Plan, CountryCode, CountrySubdivision, City, Street, and PostalZone, indicating that these fields are required. The footer of the application shows 'COPYRIGHT AND LEGAL INFO' and 'POWERED BY: TRADEMERIT'.

Illustration 7: A “focus area” style screen, with two focus areas shown (“Summary” and “Location”) Red asterisks on fields signify that a value must be provided.

3.2.3 System Interfaces

Information is communicated to the TradeMerit system by *user-initiated means*: typing information through the web browser, and uploading files through the browser; and by *system interface means*: sending EDI messages, and files. An example of user-initiated file upload is provided in *SectionError: Reference source not found*. System interface means are never directly visible to the user. Instead, stakeholder back-end systems can be configured to provide these to the TradeMerit system. An example of system interface means is the processing of the booking instructions (EDI IFTMIN message) described in *section 7.2*.

4 MOSS GM / Atlas BX Pilot Process

In the following sections we will describe the GM / Atlas BX Pilot process in detail. We will first provide an overview of the process as we understand it, for the purpose of review with the stakeholders. We then discuss the activities of each role individually, providing screen shots of the software used in the activity.

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4.1 Process Overview

Illustration 8 describes the process of the GM / Atlas BX supply chain for the part numbers addressed by the MOSS Pilot. At the level of detail depicted in *Illustration 8*, there is little difference between the current process and the MOSS process. In the figure, the role *GM* refers to the SPO operation, as well as materials management. Details of which of these organizations is performing the activity is provided in the discussion below.

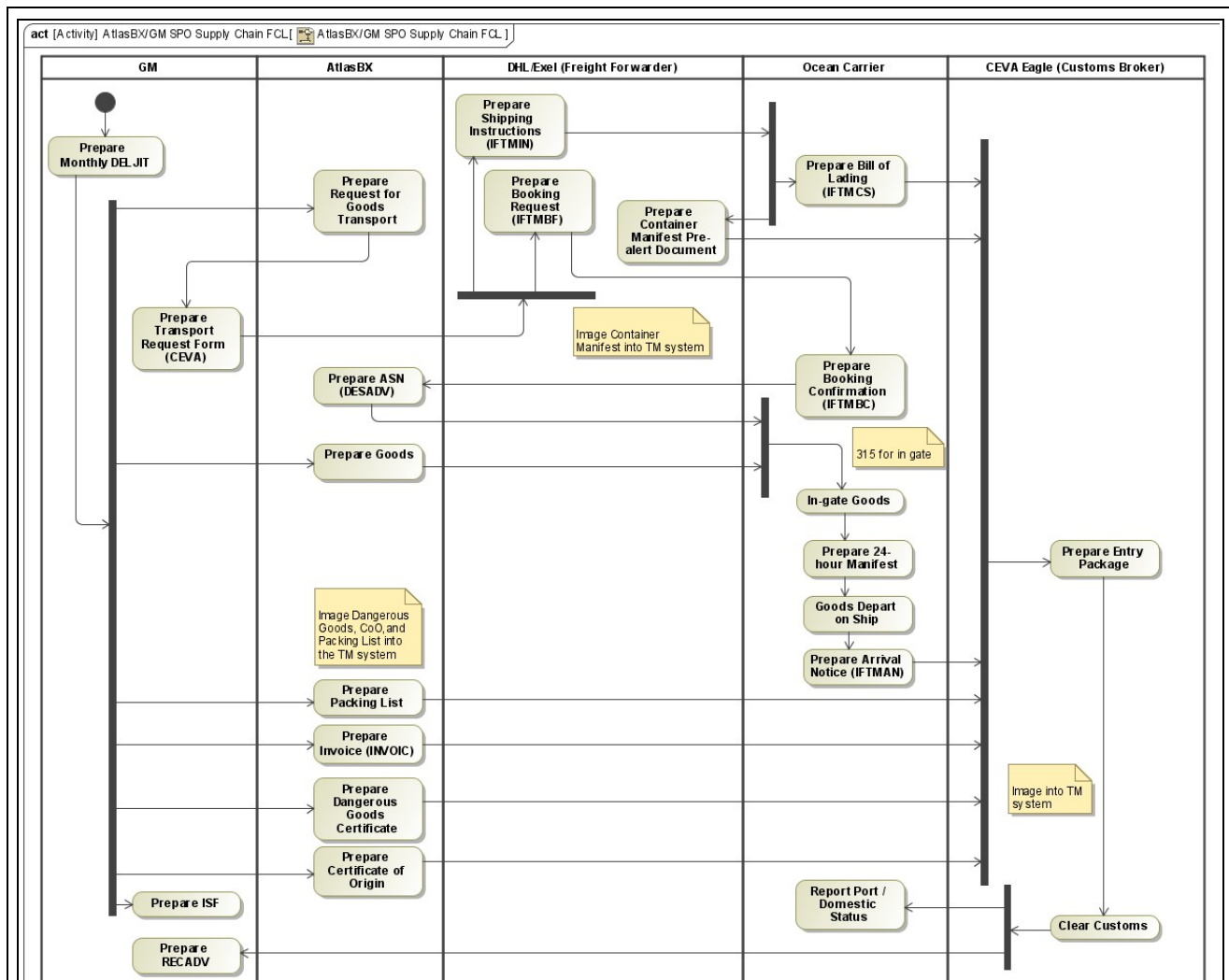


Illustration 8: Activities of the GM / Atlas BX FCL supply chain as performed in this MOSS Pilot

4.2 TradeMerit Implementation of the Supply Chain

The TradeMerit software is configured to support the GM / Atlas BX supply chain process depicted in *Illustration 8* using:

- **Shipping Plans** – describing the transportation activities needed to move the goods from the origin to destination.
- **Master Purchase Order** – identifying what goods are to be ordered from AtlasBx, and for each destination, (e.g. Kansas City SPO) what Shipping Plan should be used.

4.2.1 Shipping Plan

The business process depicted *Illustration 8* is modeled within the TradeMerit system using a graphical Shipping Plan tool. As depicted below, the Shipping Plan describes the various transportation legs and their respective responsible parties.

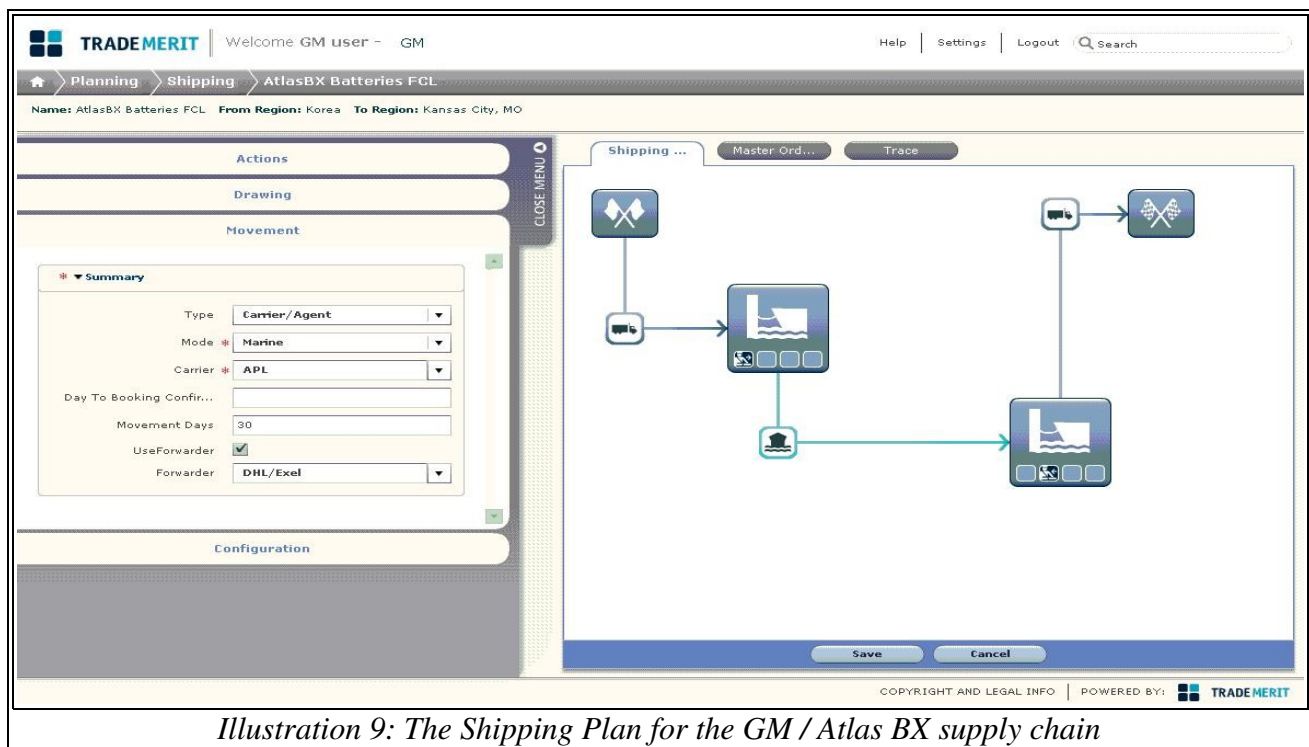


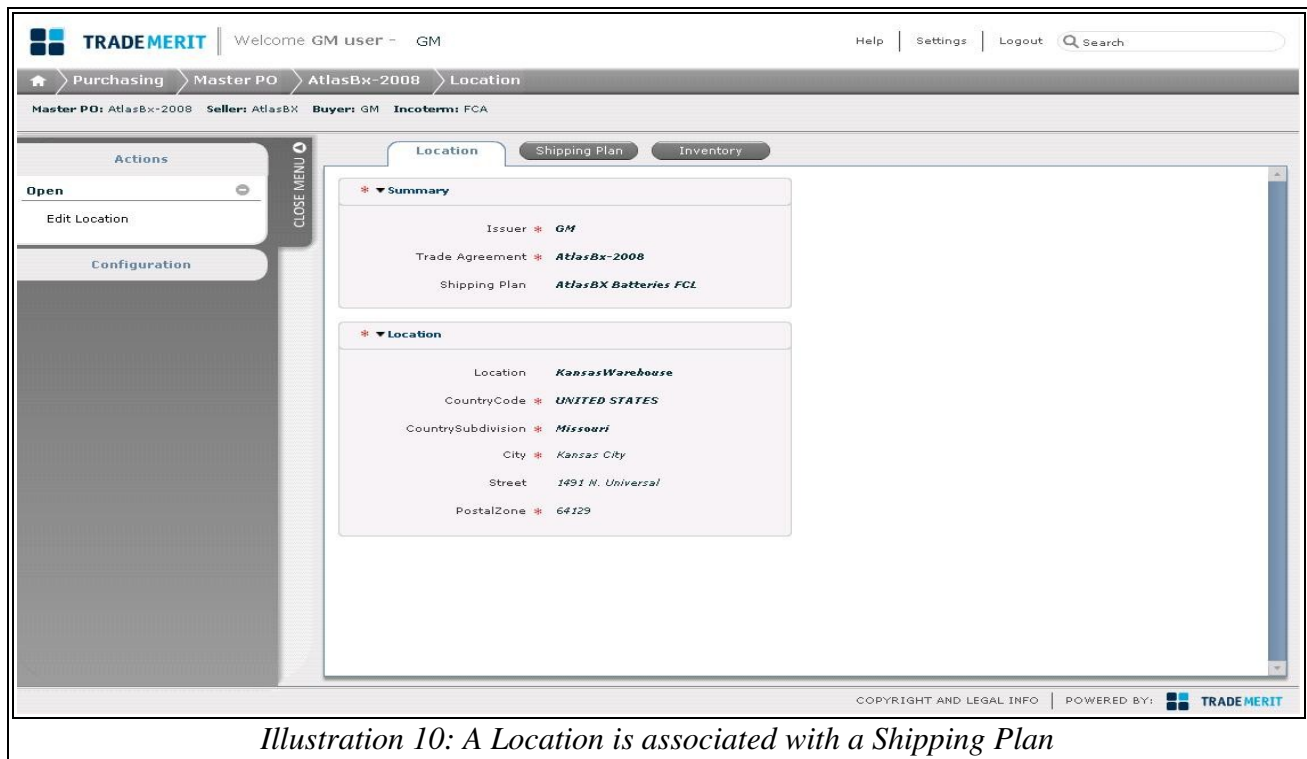
Illustration 9: The Shipping Plan for the GM / Atlas BX supply chain

As shown above, the selected Movement describes the ocean transportation and identifies APL as the Ocean Carrier while DHL/Exel is the Forwarder. Similar information is gathered for each of the Shipping Plan activities covering ports, warehouses, various modes of transportation, consolidation/deconsolidation, and compliance activities. For each of those activities, the responsible party – forwarder, carrier, broker, etc. – is configured by the user. In addition, monitoring metrics can be set to measure how long each activity is planned to take. TradeMerit uses the Shipping Plan to dynamically update its publish-subscribe model, apply security rules, and measure the performance of each party and the overall plan.

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4.2.2 Master Purchase Order

Once the Shipping Plan is defined, it can be associated with the applicable Master Purchase Order by defining Ship To location(s).



As shown above, the Kansas City SPO location is defined as a valid Ship To location for goods ordered as part of “AtlasBx-2008” Master Purchase Order. As part of this definition, the TradeMerit system is instructed to apply the specified Shipping Plan for all shipments destined to Kansas City.

5 GM Role Activities

GM's role (SPO and CEVA as material manager) is depicted in the GM swim lane of *Illustration 8*. It consists of the activities of preparing and sending the DELJIT, Transport Request Form, ISF and RECADV. These are each discussed in turn below.

5.1 Preparation of the Goods Order – DELJIT

Current Process:

The GM SPO Kansas City Warehouse sends monthly requests for replenishment to Atlas BX. The request primarily identifies part numbers, requested ship date and quantities. The request takes the form of either an EDIFACT DELJIT or a spreadsheet, depending on the parts ordered and the ship-to party involved.

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Pilot Process Overview:

As above, the GM SPO Kansas City Warehouse will send monthly requests for replenishment to Atlas BX. However, to do it GM will access the TradeMerit web tool to provide the information of the order.


Note that this information is the equivalent information of a MOSS-conforming EDIFACT DELJIT. However, there is nothing in the process described below that specifically concerns the production of an actual DELJIT message file. The DELJIT, like all EDI messages, is difficult for humans to read. Its generation is only necessary when the TradeMerit system is required to communicate with the IT systems of other stakeholders, and when it is produced, it is done in a manner transparent to the user. The purpose of the user's activity described below is to *introduce the information needed and initiate the process*, not create a message. We use the term “preparation of the DELJIT” to help EDI-minded readers understand the goal.

Note: The TradeMerit system has been pre-loaded with order information for this pilot exercise. This allows much of the information necessary for completing the goods order to be defaulted to reasonable values.

Details of the process are described in the following steps:

5.1.1 Goods Order Step 1: GM logs in

Using a web browser, (IE or Firefox is fine) the GM users navigates to <https://service.trademerit.com> and logs in. In the figure below, we use the name “user@gm.com” but you will be given your own ID and password.



TRADEMERIT

Know Where Your Business is Going!

Username user@gm.com

Password *****

Login

Forgot Password?

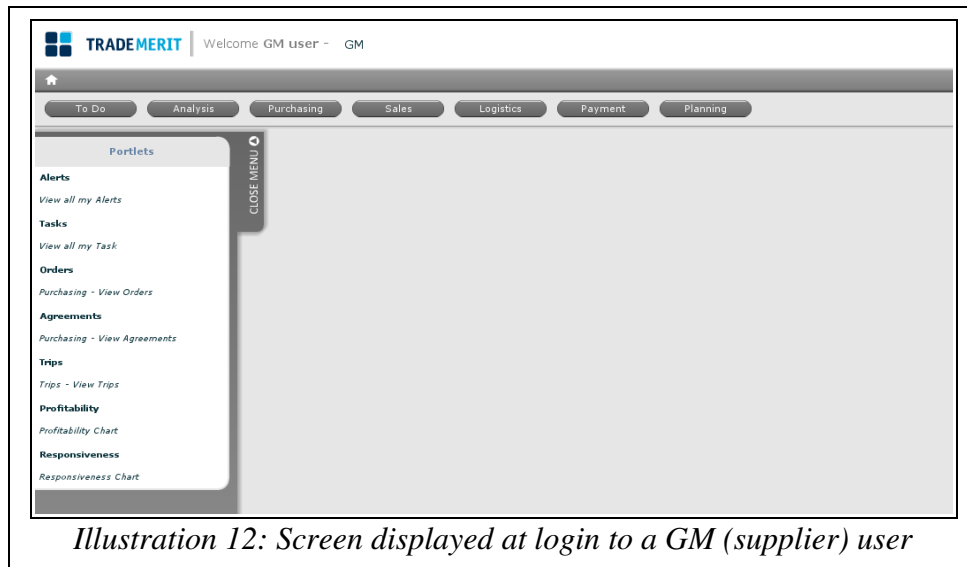
Create Account

trademerit.com

Illustration 11: Logging in as a GM user

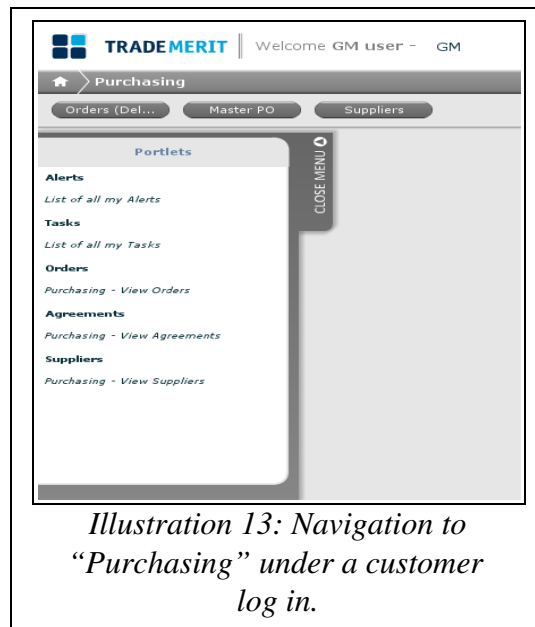
Once logged in, you will see the following screen:

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5.1.2 Goods Order Step 2: Navigate to the Delivery Order Creation Screen

From the screen depicted above, select the “Purchasing” button from the “Next Steps” area. The following screen will appear:



From this screen, select the Next Step button “Master PO.” This will allow us to select the Master PO under which goods order will be defined. When you select “Master PO” you will see the screen shown below:

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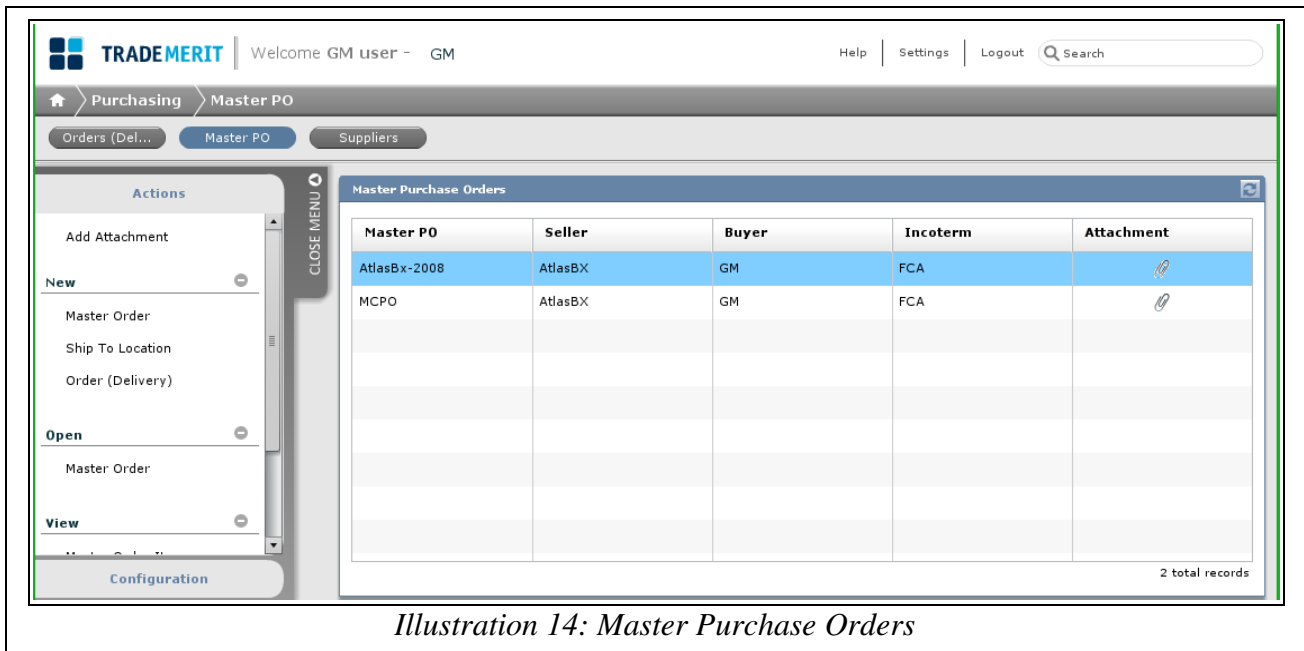


Illustration 14: Master Purchase Orders

In this screen, we selected the Master PO “AtlasBx-2008” (highlighted in blue). Once this is highlighted, selecting “Order (Delivery)” from the “New” section of the “Actions” menu on the left will start the process of creating a goods order relative to the highlighted Master PO. The Delivery Order Editing Screen will be displayed, as depicted below.

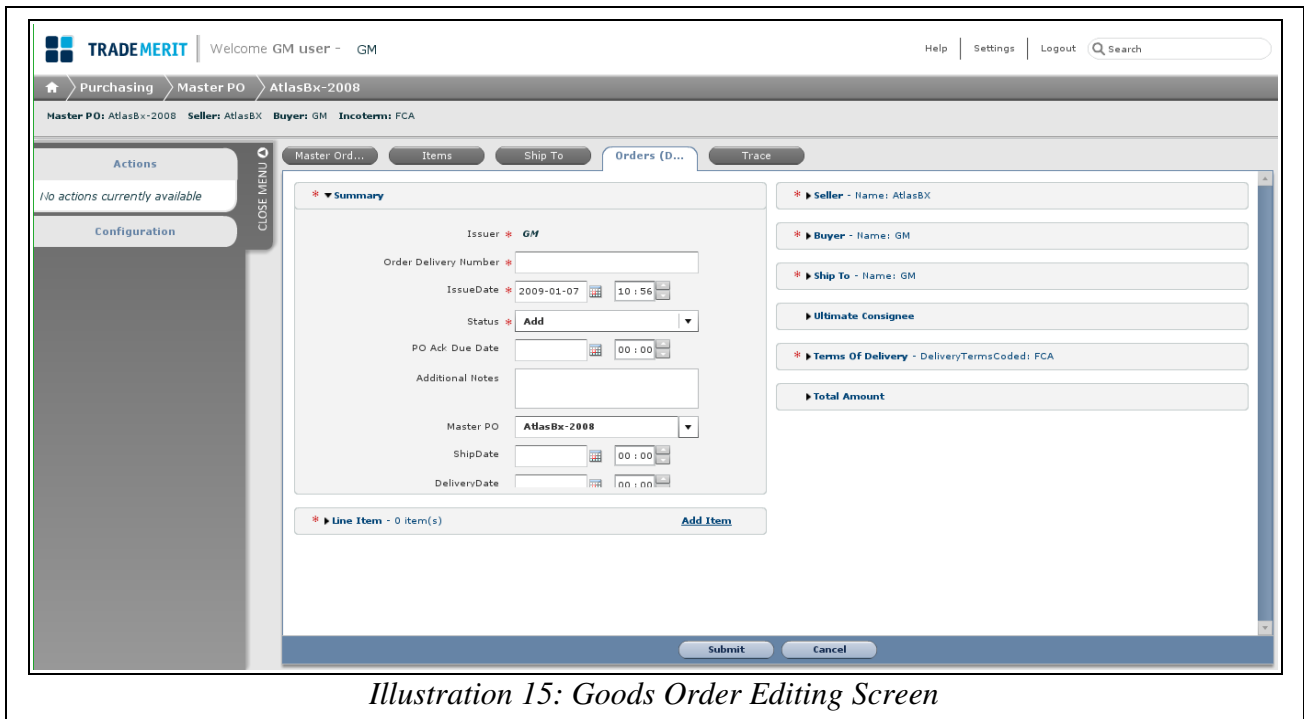


Illustration 15: Goods Order Editing Screen

Note that the menu line shows “Purchasing > Master PO > Atlas-Bx-2008” (the selected PO) and below that is the summary information (the PO number, seller, buyer, and Incoterm). From this screen you will provide all the information equivalent to a MOSS-conforming DELJIT. The work area is

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partitioned into sections (called “focus areas” labeled “Summary” “Line Item” “Seller” “Buyer” etc. The red asterisk that appears on some sections, and on some MOSS property fields (e.g. “Issue Date” above) indicate information that must be provided before the process can advance (in effect, before the DELJIT can be released to the supplier). Because this Delivery Order was created relative to a Master PO, many of the fields in the sections “Seller” “Buyer” etc. will be filled with default values, provided from the Master PO. The essential activity to be performed is to add items and quantities.

From the “Summary” partition, as shown in the figure, specify the “PO Ack Due Date” -- the date by which the supplier must respond to the goods order (or an alert will be generated).

5.1.3 Goods Order Step 3: Add Items to the Goods Order

Next we will add items to the goods order. In the section labeled “Line Items,” select the text labeled “Add Item” in the “Item” section of the work area. This will gray-out the main screen and bring up the following dialog:

The screenshot shows a 'Line Item' dialog box with the following fields and values:

Field	Value
Buyer Part *	88861317
Ordered Quantity *	
Minimum Quantity	1000
Maximum Quantity	100000
Start Date	2008-01-01 01 : 34
End Date	2008-12-31 00 : 00
Total Ordered Quantity	3780
Ship Date	
Delivery Date	
Description	BATTERY ASM CCA 800 TOP
Unit Price	
Unit Price Currency	US Dollar
Total Price	0

Buttons: Save, Close

Illustration 16: Dialog to add an item to the goods order – buyer part number selected

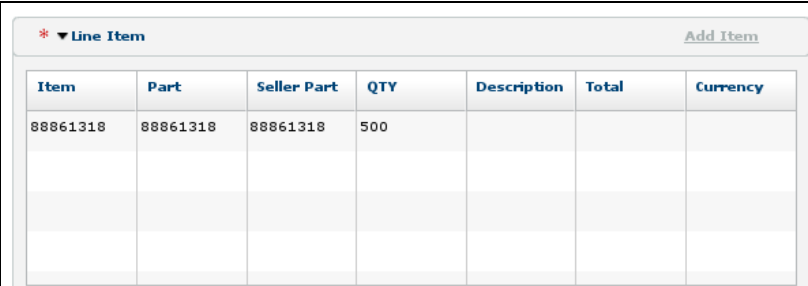
In the figure above, we selected a part number from the “Buyer Part” pull-down menu. When this is

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done, the system responds with default information including:

- **Minimum Quantity** – which is the minimum quantity to be purchased under the master purchase order.
- **Maximum Quantity** – which is likewise the maximum to be purchased under the master purchase order.
- **Total Ordered Quantity** – which is the cumulative quantity purchased under the master purchase order.
- **Unit Price** (The value is not shown in the figure.)
- **Commodity Code**
- **Country of Origin**

After specifying a value for “Ordered Quantity” select the “Save” button. A summary of the values provided in the dialog will appear as a row in the Line Item table:



The screenshot shows a web interface for a 'Line Item' table. At the top left is a red asterisk and a dropdown arrow next to the text 'Line Item'. At the top right is a link that says 'Add Item'. Below this is a table with seven columns: 'Item', 'Part', 'Seller Part', 'QTY', 'Description', 'Total', and 'Currency'. The first row contains the values '88861318', '88861318', '88861318', '500', and the remaining three columns are empty. There are three more empty rows below the first one.

Item	Part	Seller Part	QTY	Description	Total	Currency
88861318	88861318	88861318	500			

Illustration 17: A summary of line items added to the goods order.

Values for the other sections (“Seller” “Buyer” “Ship To” “Ultimate Consignee” “Terms of Delivery” and “Total Amount”) of *Illustration 18* will default to values that are appropriate for the pilot exercise, the Master PO, and the items defined. You can examine and/or change values in those sections by selecting the small triangle next to the section term to expand the section. See the figure below. The red asterisk before some sub-area forms and fields denotes a sub-area form or field that contains essential data – values must be provided (though typically values already are provided, from master order information).

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Order (De... Master Ord... Items Invoices Shipments Goods Trace

*** Summary**

Issuer * **GM**

PO Number * **DELJIT1**

IssueDate * **2008-12-16** 22 23

Status * **Update**

PO Ack Due Date

Additional Notes

Master PO **AtlasBx-2008**

ShipDate

DeliveryDate

*** Line Item** Add Item

Item	Part	Seller Part	QTY	Description	Total	Currency
88861317	88861317	88861317	500	BATTERY A...	25000	USD

*** Seller** - Name: AtlasBX

*** Buyer** - Name: GM

*** Ship To** - Name: GM

*** Ultimate Consignee** - Name: GM

*** Terms Of Delivery** - DeliveryTermsCoded: FCA

Total Amount

Illustration 18: All focus areas of the goods order

5.2 Preparation of Transport Request Form

Current Process Overview

When goods are ready to ship, Atlas Bx makes a request through email to CEVA Singapore for goods transport. The request specifies the container size, and the number and size of packages. CEVA arranges through DHL for container drop-off, and assigns the shipment STI (CEVA's Shipment ID, MOSS Seller's Shipment Reference Number) and MTI (CEVA's Master Transportation ID, MOSS Transport Reference Number).

Pilot Process Overview

When goods are ready to ship, AtlasBX will make a request for goods transport (see *Section 6.1*). The request specifies the container size, and the number and size of packages. This information is used by the freight forwarder to order the container. It is also used by CEVA's tracking and billing systems. By providing CEVA's STI and MTI numbers to the TradeMerit system using the process discussed below, the two descriptions of the shipment are linked.

5.3 Preparation of the Receiving Advice – RECADV

Current Process Overview

A GM SPO Kansas City warehouse operator, upon receipt of each shipment from Atlas BX, creates an EDI RECADV message to report received overage and short quantities, and damaged goods.

Pilot Process Overview

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A GMSPO Kansas City warehouse operator will access TradeMerit MOSS web tool to generate a report overage, short quantities and damaged goods for Atlas BX shipments. The details of this process are described below.

5.3.1 Receiving Advice – Step 1 : GM Logs In, Navigate to Shipment

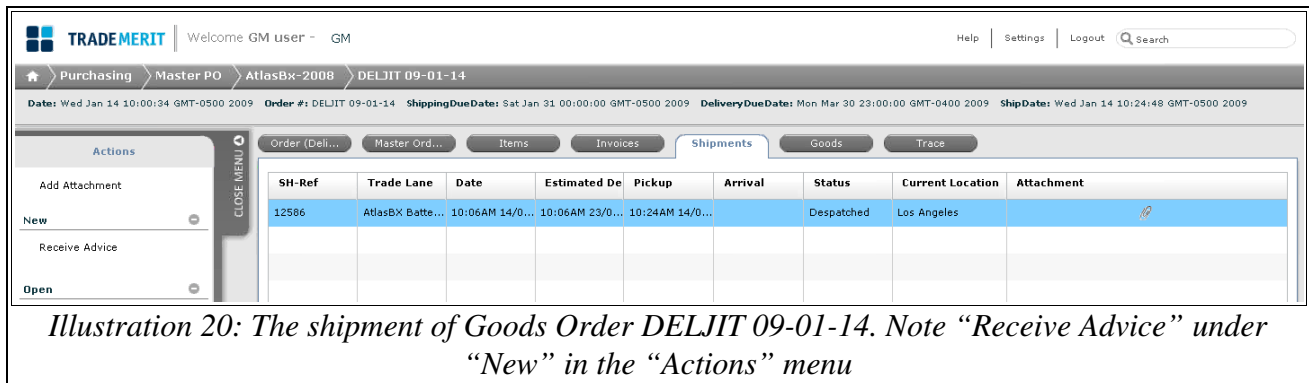
The user logs into the TradeMerit system as depicted in *Illustrations 11* and *12* in *Section 5.1.1*. There are two ways to navigate to the shipment on which you will report goods receipt. The first is to navigate from the login screen to “Purchasing > Master PO” and choose the Master PO for the shipment (our screen shots show Master PO “AtlasBx-2008,” though for the pilot, there will be an “AtlasBX-2009.”) See *Illustrations 13* and *14*. With the Master PO select, (1) select the “Order (Delivery)” from the “View” section of the “Actions” menu, (2) select a goods order from the spreadsheet it displays, and (3) select “Order Shipments” from the “Actions” menu on the left. This is depicted in *Illustration 19*, below.

Date	Order #	ShippingDue	DeliveryDue	ShipDate	DeliveryDate	Status	#
2:22PM 15/12...	Order D2					Ready To Ship	
3:14PM 15/12...	Order D3			3:40PM 19/12...	4:03PM 15/12...	Delivered	
10:23PM 16/1...	DELJIT1					Pending	
12:30AM 17/1...	DELJIT3					Ready To Ship	
1:29AM 17/12...	Order T1	12:00AM 17/1...	12:00AM 31/1...	1:36AM 17/12...		Despatched	
2:15AM 17/12...	order1					Pending	
10:46AM 17/1...	DELJIT 10	12:00AM 11/0...	12:00AM 28/0...	11:11AM 17/1...		Despatched	
10:19PM 08/0...	DejithZ	12:00AM 15/0...	10:19PM 22/0...	11:23PM 08/0...		Despatched	
11:59PM 08/0...	DELJITHZ2					Pending	
4:30AM 09/01...	DELJIT 20090107			4:52AM 09/01...	6:21AM 09/01...	Delivered	
7:35AM 09/01...	DELJIT091					Ready To Ship	
10:06AM 09/0...	DELJIT090109	12:00AM 13/0...	11:00PM 26/0...	10:24AM 09/0...		Despatched	
10:00AM 14/0...	DELJIT 09-01-14	12:00AM 31/0...	11:00PM 30/0...	10:24AM 14/0...		Despatched	

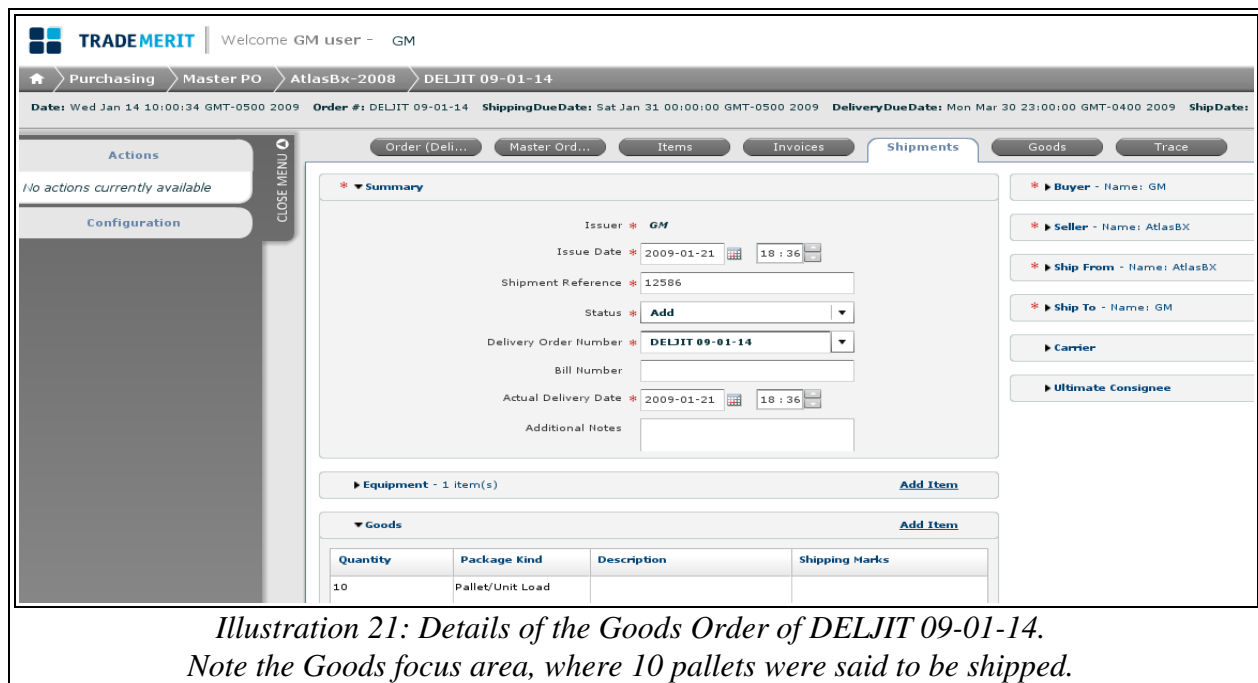
Illustration 19: Selection to View DELJIT 09-01-14 from the Orders (Delivery) tab of Master PO AtlasBx-2008

Selecting the “Shipments” tab from the will respond with the list of shipments associated with the order. (There is just one shipment per delivery order in this GM / Atlas BX supply chain.) This is depicted in *Illustration 20*.

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Selecting “Receive Advice” from the “New” Section of the “Actions” menu results in the system responding with the shipment details, depicted in *Illustration 21*.



5.3.2 Receiving Advice – Step 2 : Complete Item-level Information

The “Goods” section of the Shipment detail shows a list of the line items of the order. This is depicted toward the bottom of Illustration 21. Selecting a line item from that list, bring up a dialog from which the actual quantity (“Received Quantity”) and damage can be reported. This is depicted in *Illustration 22*, below.

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The screenshot shows a 'Goods' dialog box with the following fields and sections:

- ShipmentLineNumber
- Shipped Quantity: 1.0
- Received Quantity: 1.0
- Package Kind: Pallet/Unit Load (dropdown)
- Description
- Commodity Code
- Shipping Marks
- Measurements
- * ► Items - 1 item(s) [Add Item](#)
- Equipments - 1 item(s) [Add Item](#)
- * ► Stuffing Party - Name: AtlasBX

Illustration 22: Dialog for the reporting of actual received quantities

Select the “Save” button from this dialog to complete the receipt of the item. When all items are reported through the procedure just described, select “Submit” from the shipment details screen to complete the task. The second method to reach the shipment for receipt advice reporting is to navigate the path “Purchasing > Orders (Delivery),” select “Order Shipments” from “View” section of the “Actions” menu. From there you have a list of shipments and the procedure just described can be picked up at *Illustration 20*.

5.4 Preparation of the Importer Security Filing (10+2)

Current Process Overview

Not applicable

Pilot Process Overview

The TradeMerit technology tool enables the Importer (GM) to collect all ISF data in an electronic format. The source for each data element is as follows:

5.4.1 ISF-10 for Imports

ISF Data	MOSS Property	Format	MOSS Pilot Origin
Manufacturer (or supplier)	Line Item Manufacturer Party ID	Name and address or DUNS. Code MF	GM “Order” Atlas BX DESADV, INVOIC
Seller	Seller Party ID	Name and address or DUNS. Code SE	GM “Order”, GM DELFOR, Atlas BX DESADV, Atlas BX INVOIC
Buyer	Buyer Party ID	Name and address or	GM ”“Order”, GM DELFOR, GM

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		DUNS, Code BY	DELJIT, Atlas BX DESADV, Atlas BX INVOIC
Ship To	Ship To Party ID	Name and address or DUNS, Code ST	GM DELJIT Atlas BX DESADV
Scheduled Container Stuffing Location	Line Item Container Stuffing Location Party ID	Address or DUNS, Code LG	Atlas BX DESADV, Atlas BX INVOIC
Consolidator (stuffer)	Consolidator Party ID	Name and address or DUNS, Code CS	Atlas BX DESADV
ISF Importer	Buyer Importer of Record Number	Number, Importer of record Number	GM “Order”, GM DELFOR, GM DELJIT, Atlas BX DESADV, Atlas BX INVOIC
Consignee Identification Number	Ultimate Consignee IRS No.	Number (IRS, SSN, Customs-assigned, CBP encrypted ID), Code CN	GM “ORDER”, DELFOR, DESADV
Country of Origin	Line Item Country of Origin Code Term	Country code, 2 position ISO country code	GM DELJIT, Atlas BX DESADV, Atlas BX INVOIC
Commodity HTS Number	Line Item HTS	Number, minimum 6 digit	GM “Order”, GM DELFOR, Atlas BX DESADV, Atlas BX INVOIC
Ocean Bill of Lading	Bill of Lading Number	Number, lowest level to the House Bill (use code OB for “Regular” Ocean Bills of Lading and BM for House Bill of Lading)	IFTMBC, Atlas BX DESADV
	House Bill Number		IFTMBC, Atlas BX DESADV

6 Atlas BX Role Activities

Atlas BX’s role is depicted in the Atlas BX swim lane of *Illustration 7*. It consists of the activities of making a request for a container, attaching imaged documents, and creating the advance ship notice (ASN). In the process of making the request for a container, most of the information needed to produce an invoice is provided, so if it is needed, a .pdf of the invoice can be produced any time afterward. The documents that should be attached include the packing list, pallet list, certificate of origin and dangerous goods certificate. Typically the container request describes all the information needed to create the ASN.

The details of these processes are depicted in *Illustration 23* and described step-by-step in this section.

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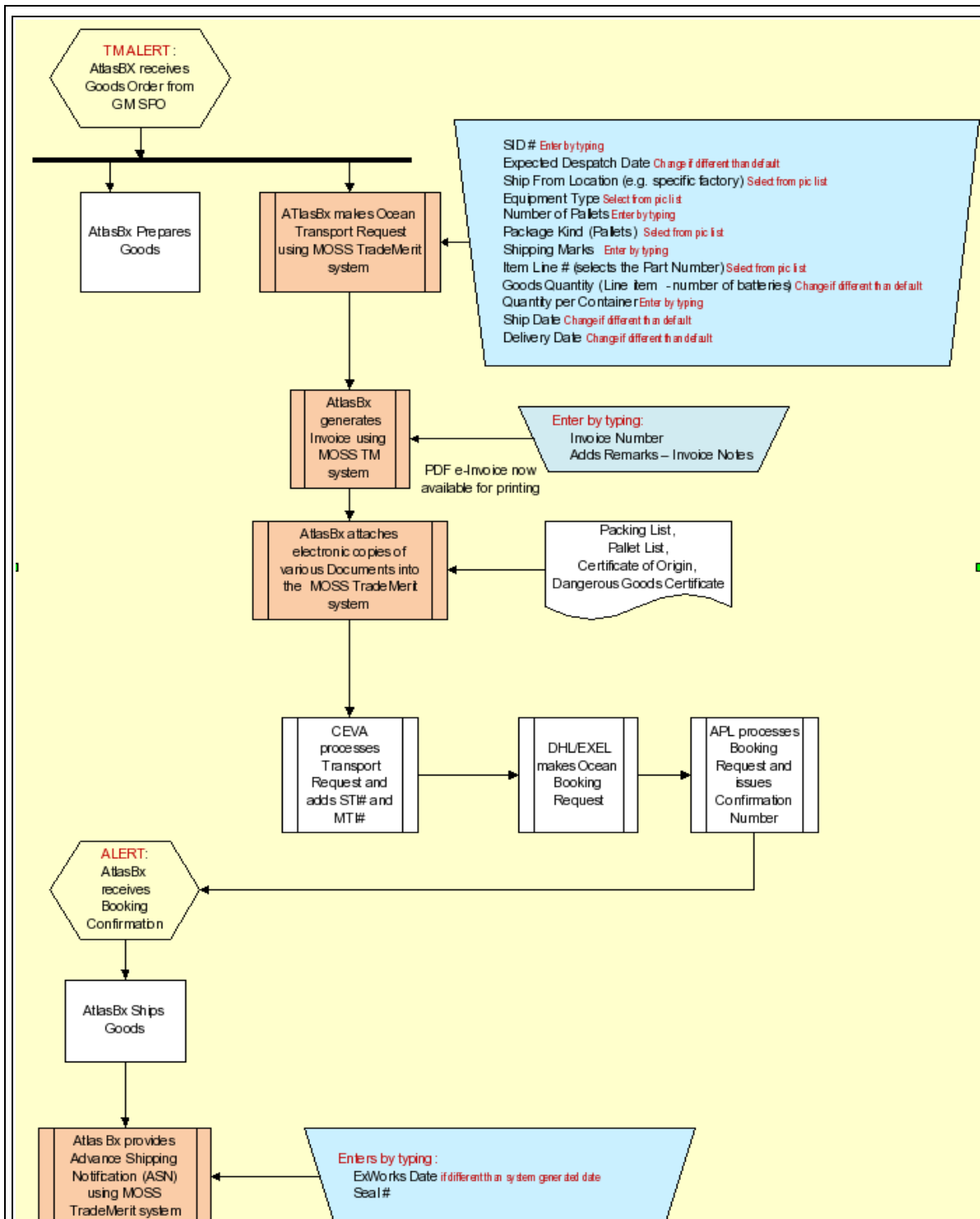


Illustration 23: Overview of AtlasBX Pilot Processes

6.1 Preparation of the Goods Transport Request

Current Process Overview

Atlas BX provides to GM (CEVA Singapore, acting as the material manager) notice of their need for containers and the date at which the goods will be ready for stuffing. Using this information, the material manager, CEVA, sends a Transportation Request Form to the Freight Forwarder, EXEL. The Transportation Request Form serves as notification for the freight forwarder to initiate ocean booking.

Atlas BX receives the APL sailing schedule from the freight forwarder. The shipment is “Port to Door,” therefore, using the schedule, Atlas BX arranges for inland transportation from their facility to the Port of Busan.

Pilot Process Overview

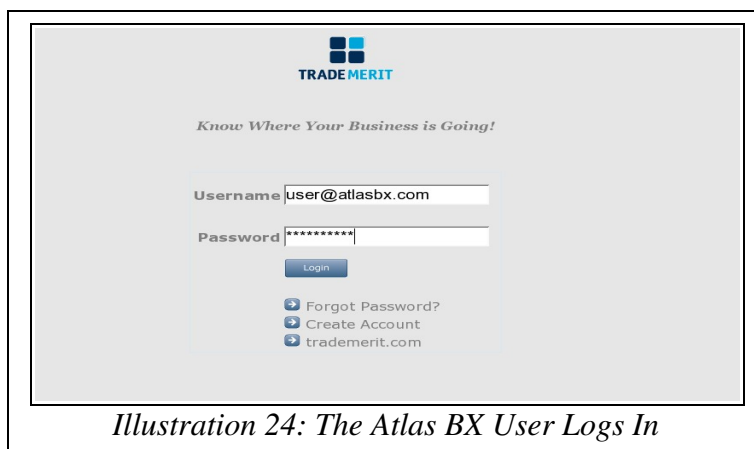
Atlas BX will log in to the TradeMerit system to provide notice of their need for containers and the date at which the goods will be ready for stuffing. The information provided is also key information to the definition of the ASN and the invoice, and will be reused in those downstream processes. In the process of specifying the information, the TradeMerit system creates a task for the material manager and freight forwarder, DHL/EXEL, to initiate booking. This “task” is viewable from their respective TradeMerit accounts.

As above, Atlas BX receives the APL sailing schedule from the freight forwarder. The shipment is “Port to Door,” therefore, using the schedule, Atlas BX arranges for inland transportation from their facility to the Port of Busan.

Details of the process are described in the following steps.

6.1.1 Goods Transport Request – Step 1 : Atlas BX logs in, acts on Alert

Using a web browser, (IE or Firefox is fine) the Atlas BX users navigates to <https://service.trademerit.com> and logs in. In the figure below, we use the user name “user@atlasbx.com” but you will be given your own ID and password.



Once logged in, you will see the following screen:

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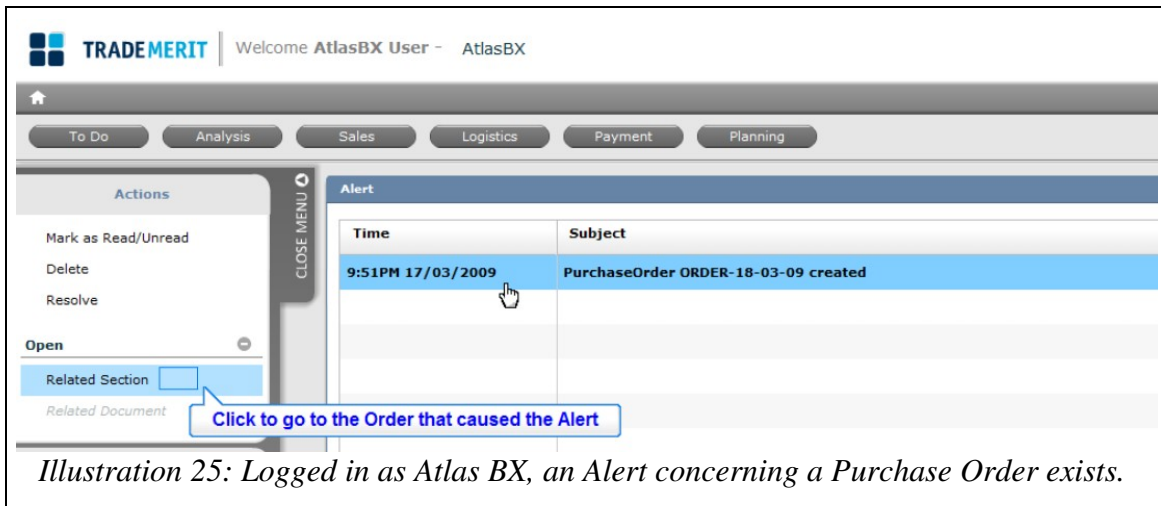


Illustration 25: Logged in as Atlas BX, an Alert concerning a Purchase Order exists.

As *Illustration 25* depicts, there is an alert, generated at 9:51PM March 17, 2009. An alert announces the occurrence of something. The system is configured to provide you with this type of alert (“purchase order created”) because it concerns something relevant to your work. To examine the Purchase Order that caused the Alert, click on “Related Section” this brings you to a list of Orders, depicted in *Illustration 26*. The order that created the alert is automatically highlighted.

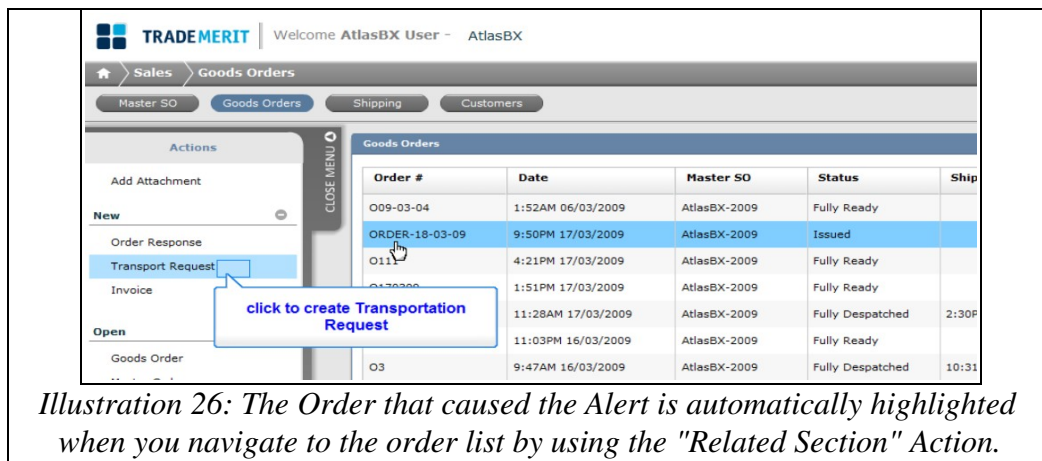


Illustration 26: The Order that caused the Alert is automatically highlighted when you navigate to the order list by using the "Related Section" Action.

In response to this alert, we will now create the transport request for this highlighted order. We start this by selecting the Action “Transport Request” as depicted in *Illustration 26*. The system responds with the Order detail screen opened to the Packaging Tab. (See *Illustration 27*.)

6.1.2 Goods Transport Request – Step 2: Summary, Ship From, Information for Order

The entire process of making the Goods Transport Request (request for a container) is performed from the screen depicted in *Illustration 27*. However in the process, several dialogs are brought up, and inside of one dialog, another dialog is brought up. The structure of the activities, and which are performed in

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which dialogs, are depicted in *Illustration 28*.

Illustration 27: The Order Packages Tab, where you will specify the complete information for the transport request (container type, ship from location, and packaging)

Illustration 28: Every task toward completing the container request is performed in the Order Packages Tab, but several focus areas and dialogs are used

The first step, as *Illustration 28* suggests, is to specify the SID (Shipment ID number) and check that the default Expected Ready Date (when the goods will be ready for stuffing) is correct. This is

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performed in the Summary section, depicted in *Illustration 27*, above.

The second step is to specify the Ship From location. Open the “Ship From” section as depicted in *Illustration 29*. We assume that the correct location is the Daejeon factory, it is in the short list of possible locations. Select it.

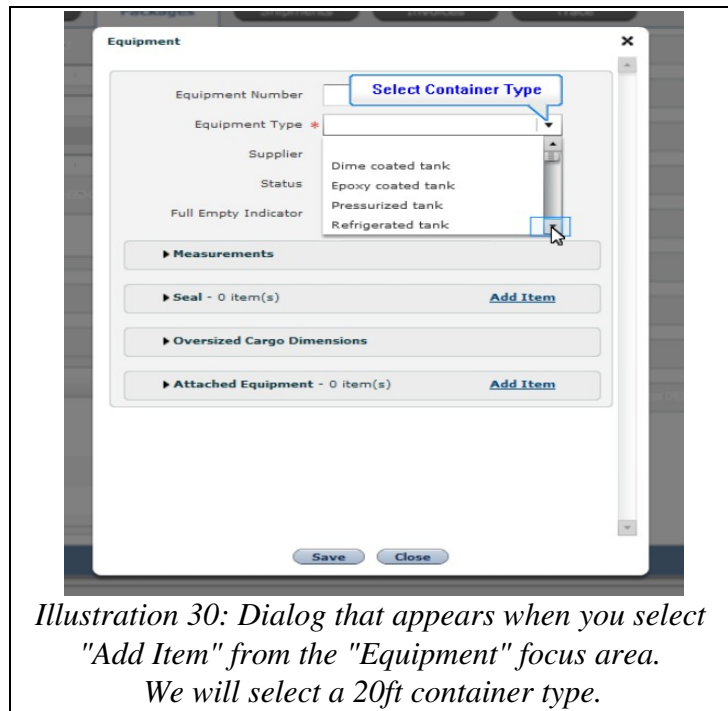
The screenshot displays the TRADEMERIT AtlasBX web application. The top navigation bar includes the TRADEMERIT logo, a welcome message for 'AtlasBX User', and links for Help, Settings, Logout, and a search bar. The main header shows the current order: 'ORDER-18-03-09'. Below this, a status bar provides details: 'Order #', 'Date' (Tue Mar 17 21:50:10 GMT-0400 2009), 'Master SO' (AtlasBX-2009), 'Shipping (Planned)' (Fri Apr 10 03:00:00 GMT-0400 2009), and 'Delivery (Planned)' (Fri May 8 04:00:00 GMT-0400 2009). The left sidebar contains 'Actions' (No actions currently available) and 'Configuration'. The main content area is divided into tabs: Order, Master Order, Items, Packages, Shipments, Invoices, and Trace. The 'Summary' tab is active, showing fields for Issuer (AtlasBX), Issue Date (2009-03-17 21:52), SID (765718), Status (Add), Expected Ready Date (2009-03-17 21:52), Goods Order Number (ORDER-18-03-09), and Additional Notes. Below these are sections for 'Manufacturer' and 'Equipment' (0 item(s) with an 'Add Item' button). On the right, the 'Ship From' section is expanded, showing a dropdown for 'Location' with a list of options: HQ and Daejeon Factory. A blue callout box with a pointer to the 'Daejeon Factory' option contains the text: 'Select the Factory from where the Goods will be shipped'.

Illustration 29: Select the Ship From Location "Daejeon Factory"

6.1.3 Goods Transport Request – Step 3: Container Type

The next step is to specify the kind of container you need. You do this by selecting “Add Item” from the Equipment section of the screen. You can see the “Equipment” section and its “Add Item” button in *Illustration 29*, above. Selecting “Add Item” brings up the dialog shown in *Illustration 30*.

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6.1.4 Goods Transport Request – Step 4: Packaging

As *Illustration 28*, the menu nesting diagram suggests, the remaining activities are performed in the “Packaging” section of the main screen. The goal of this task is to define how many pallets will be used, what items will be placed on them, and in what container they will be placed. In the example we are using, we are shipping 840 batteries (all of one part number) on 10 pallets (84 batteries per pallet). All of the pallets go into the same container (the only container specified).

By selecting “Add Item” from the Packaging section (the packaging section appears in *Illustration 27*) you are presented with the dialog shown in *Illustration 31*. In this dialog, type the number of pallets, and select “Pallets” from the pull-down menu (you can type “pa” to shorten the size of this menu before you pull it down). You can define shipping marks for these pallets by typing the text into the “Shipping Marks” text area.

Next associate items with these pallets by selecting “Add Item” from the “Items” section of the dialog (also shown in *Illustration 31*).

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The screenshot shows a 'Packaging' dialog box. The 'Quantity' field is set to 10. The 'Package Kind' dropdown is set to 'PALLET'. Below the input fields are four expandable sections: 'Measurements', 'Items - 0 item(s)', 'Equipments - 0 item(s)', and 'Stuffing Party'. Each section has an 'Add Item' button. The 'Items' section's 'Add Item' button is highlighted with a mouse cursor. At the bottom are 'Save' and 'Close' buttons.

Illustration 31: Specifying 10 Pallets, then bring up the second dialog by selecting “Add Item”

By selection “Add Item” from the “Items” section of the dialog depicted in Illustration 31, you bring up the second dialog, in which you can associate order items with the quantity of pallets just specified. The second dialog is depicted in *Illustration 31*. In that illustration, the dialog shows how it would look once you select a “Line Number” from the pull down list. Line Number refers to a line item in the Order, the quantity, item description and other information depicted in this dialog are automatically defaulted to the values from the order information. When you select a line number, if the values are OK, then just select the “Save” button, otherwise change the values and then select “Save.”

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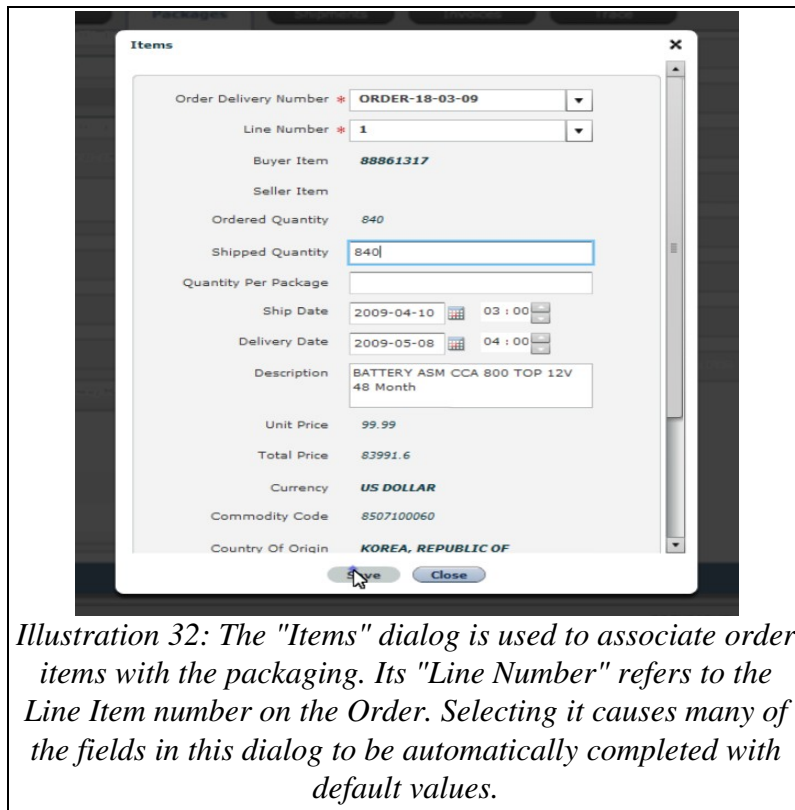


Illustration 32: The "Items" dialog is used to associate order items with the packaging. Its "Line Number" refers to the Line Item number on the Order. Selecting it causes many of the fields in this dialog to be automatically completed with default values.

When "Save" is selected from the "Items" dialog, you are returned to the "Packaging" dialog that was depicted in Illustration 31, however now it shows an item associated with this dialog, as depicted in Illustration 33. It also shows a commodity code and monetary value for these packages. This, of course, isn't directly useful information for the container request, but information in this form appears on the invoice. You would continue adding items using this dialog as necessary to associate all the goods with pallets. Each time, the "spreadsheet" of items depicted in Illustration 33 will be updated.

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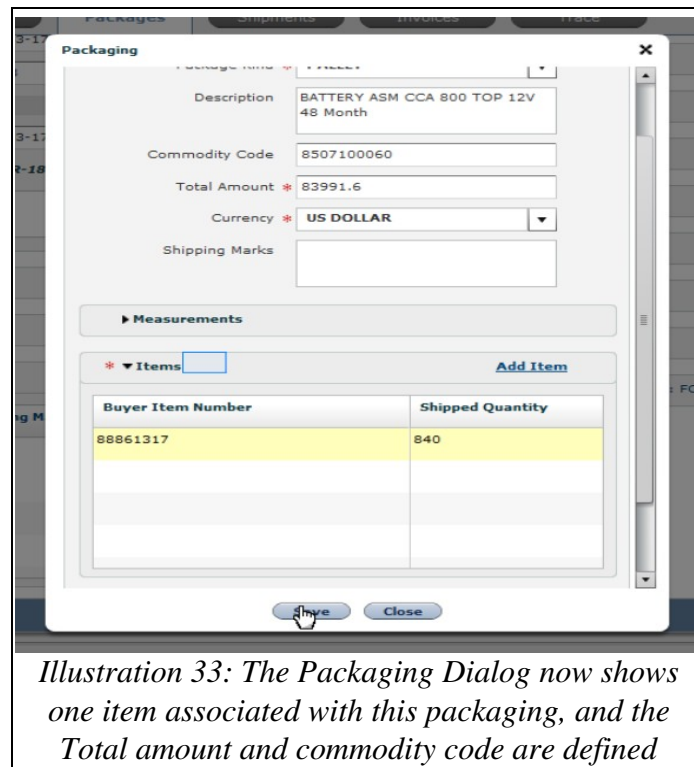


Illustration 33: The Packaging Dialog now shows one item associated with this packaging, and the Total amount and commodity code are defined

6.1.5 Goods Transport Request – Step 5: Linking the Packages to the Container

The final step of the Goods Transport Request is to specify what packages will be stuffed in what container. This is done by reference to the container (or “equipment”) defined in Step 3 above, and the number of packages of the item to be associated with that container. The Equipment specified in Step 3 is referenced by an index assigned to it starting at 1 for the first equipment (container) defined. In the example there is only one container. As Illustration 28 suggests, this work is done in the “Equipments” section of the “Packaging” dialog. This section is found directly below the “Items” section in that dialog. (See *Illustration 31*). Selecting “Add Item” in the “Equipments” section brings up the dialog shown in *Illustration 34*.

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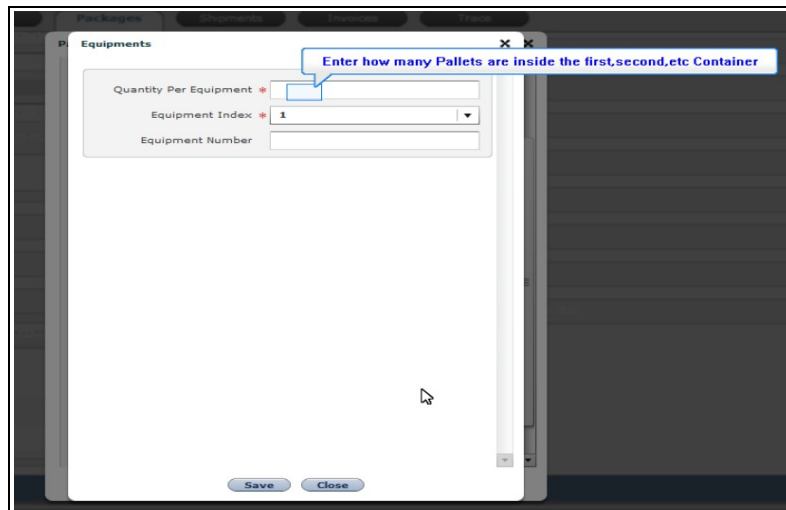


Illustration 34: The Dialog brought up through "Equipments" "Add Item" of the "Packages" dialog.

In this dialog we need only specify the “Quantity Per Equipment” -- the number of pallets of the items that will be placed in the container. In the example it is 10. We type 10 and select the “Save” Button. The system returns us to the “Packaging” dialog, but now it shows the “Quantity Per Equipment” of the items, as depicted in *Illustration 35*.

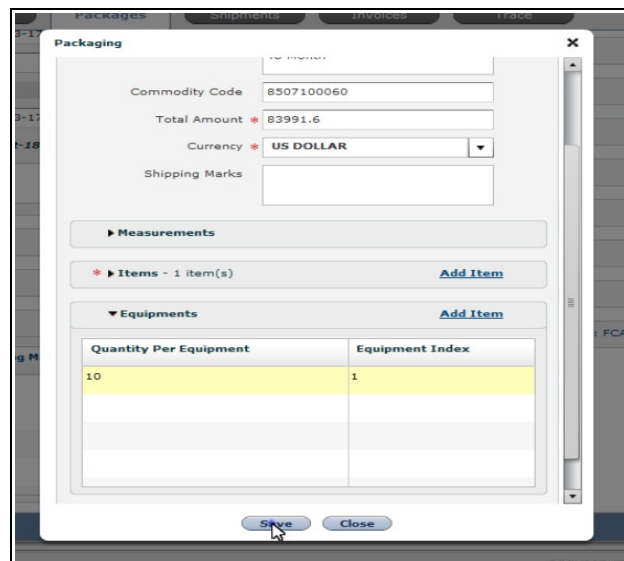


Illustration 35: Selecting "Save" on the Equipments Dialog returns to the "Packaging" dialog, where the pallet quantity of items in the container is now shown.

You are now done with specifying information. Select the “Save” button on the Packaging dialog itself. You will be returned to the Order detail, Packaging tab, as depicted in *Illustration 36*.

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The screenshot shows the TRADEMERIT interface for user AtlasBX. The main header includes 'Welcome AtlasBX User - AtlasBX' and navigation links for 'Sales', 'Goods Orders', and 'ORDER-18-03-09'. Below the header, there's a summary bar with order details: 'Order #: ORDER-18-03-09', 'Date: Tue Mar 17 21:50:10 GMT-0400 2009', 'Master SO: AtlasBX-2009', 'Shipping (Planned): Fri Apr 10 03:00:00 GMT-0400 2009', and 'Delivery (Planned): Fri May 8 04:00:00 GMT-0400 2009'. The left sidebar has 'Actions' (No actions currently available) and 'Configuration'. The main content area has tabs for 'Order', 'Master Order', 'Items', 'Packages', 'Shipments', 'Invoices', and 'Trace'. The 'Packages' tab is selected, showing a form with fields for 'Issue Date' (2009-03-17), 'SID' (765718), 'Status' (Add), 'Expected Ready Date' (2009-03-17), and 'Goods Order Number' (ORDER-18-03-09). Below this is a table for 'Packaging' with columns: Quantity, Package Kind, Shipping Marks, and Description. The table contains one row: 10, PALLET, BATTERY ASM CCA 80... At the bottom right, there are 'Submit' and 'Cancel' buttons.

Illustration 36: Equipment and Packaging have been completed. Selecting “Submit” will make the Transport Request.

When you select “Submit” from the Order detail screen, as depicted in *Illustration 36*, you will be returned to the Order Packages spread sheet, as depicted in *Illustration 37*. From here you can look at other views, such as the “Shipments.” In *Illustration 38* shows the shipment Status as “Ready” and its Current Location as “Daejeon Factory.”

The screenshot shows the TRADEMERIT interface for user AtlasBX. The main header includes 'Welcome AtlasBX User - AtlasBX' and navigation links for 'Sales', 'Goods Orders', and 'ORDER-18-03-09'. Below the header, there's a summary bar with order details: 'Order #: ORDER-18-03-09', 'Date: Tue Mar 17 21:50:10 GMT-0400 2009', 'Master SO: AtlasBX-2009', 'Shipping (Planned): Fri Apr 10 03:00:00 GMT-0400 2009', and 'Delivery (Planned): Fri May 8 04:00:00 GMT-0400 2009'. The left sidebar has 'Actions' (New, Transport Request) and 'Configuration'. The main content area has tabs for 'Order', 'Master Order', 'Items', 'Packages', 'Shipments', 'Invoices', and 'Trace'. The 'Packages' tab is selected, showing a table with columns: Quantity, Package Kind, Item Number, Current Location, Consignee Location, and Consignor Location. The table contains one row: 10, PALLET, 88861317, KansasWarehouse, Daejeon Factory. A tooltip message states: 'Now, TradeMerit system notifies Partners that there are 10 Pallets of the above Item number to be shipped'.

Illustration 37: Closing the Order returns to the Order spreadsheet.

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SH-Ref	Date	Status	Shipping Plan	Estimated Date	Current Location
765718	9:54PM 17/03/2009	Ready	FCL Batteries		Daejeon Factory

Illustration 38: Having completed the Request for Transport (request for container) the Shipments spreadsheet now shows this order Status "Ready" and Current Location "Daejeon Factory"

6.2 Attaching the CoO, Dangerous Goods Cert, and other documents to the shipment.

Current Process Overview

Atlas BX obtains paper copies of the Certificate of Origin, Dangerous Goods Certificate, and other shipment-related documents. These documents are imaged and emailed or faxed to the material manager, freight forwarder, and customs broker.

Pilot Process Overview

As above, Atlas BX obtains paper copies of the Certificate of Origin, Dangerous Goods Certificate, and other shipment-related documents. These documents will be imaged and the electronic copies will be associated with the shipment through an uploading process to the TradeMerit system. The documents are thereby available to any party with a recognized need for them.

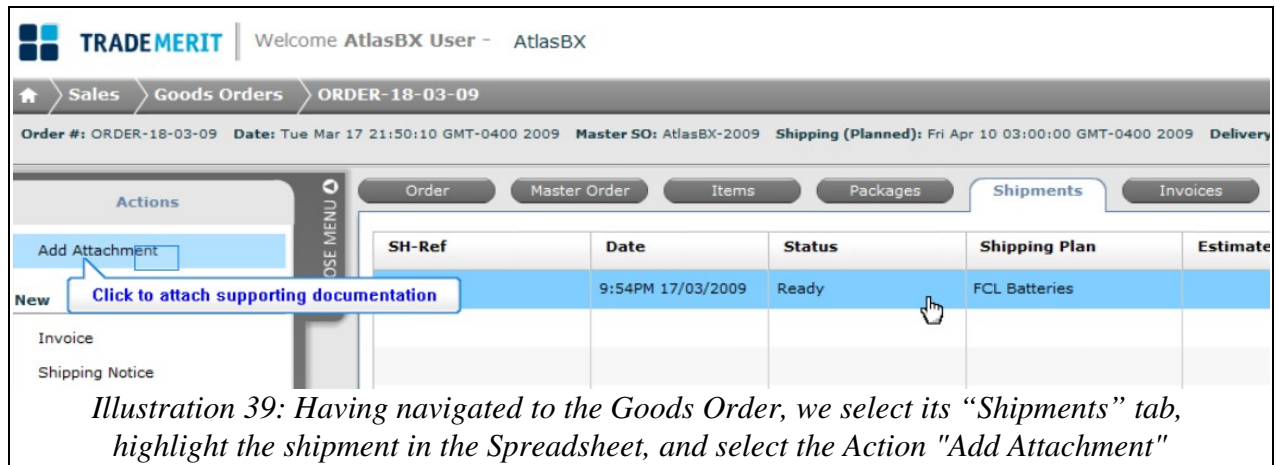
Any sort of file can be associated with a shipment. The key points to doing so are finding the correct shipment and using file names that help others understand what the file represents. For example, "file123" doesn't tell us much. "certificate_of_origin.pdf" does.

6.2.1 Attach Document Step 1 – Navigate to the Shipment

The first step of attaching a document is to find the shipment that you want to attach the document to. There are a number of ways to do this. The fastest may be to navigate from the "Home Icon" to "Sales" and then "Goods Orders." At "Goods Order" you are presented with a spreadsheet from which you would choose a goods order. In the goods order select the "Shipments" tab to see the shipments associated with it.

Illustration 39 depicts the result of such a navigation. A shipment (the only shipment) is selected, and the action "Add Attachment" is then selected.

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6.2.2 Attach Document Step 2 – Upload File

When “Add Attachment” is selected, the system replaces the shipment spreadsheet with single focus area where the “File Type” and “File” can be specified. (See *Illustration 41*).

The File Type pull down list depicted in *Illustration 41* can be set to “Document” for .pdf, .xls, .doc files; or “Image” for files that are images or scanned images such as .png, .jpg, .tif, .bmp.

In order to verify that the attachment has been uploaded, and to see other attachments that have been uploaded, select the paper clip icon (right side of orders spreadsheet).

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6.3 Preparation of the Advance Shipping Notice – DESADV

Current Process Overview

Atlas BX provides information to CEVA Singapore for the preparation of an advance shipment notice, which CEVA transmits to GM. CEVA Singapore also enters this information into its back-end inventory management system.

Pilot Process Overview:

Atlas BX will log in to their account on the TradeMerit system and provide whatever additional information is needed to produce the equivalent to a MOSS-conforming DESADV message. In fact, this is very little additional information, since it was mostly already specified in the request for a container. The only additional items of information identified at this time is the ship date and seal number. (The container number, booking number etc. will have been made available by execution of tasks by the material manager, freight forwarder and ocean carrier.)

The details of the process are described in the following paragraphs.

6.3.1 ASN – Step 1 : Login and Navigation to the Shipment

The AtlasBX user logs in the TradeMerit system as described in *Section 6.1.1*. From the screen provided after login, use the Next Step buttons to navigate to “Sales > Orders.” The system responds with a screen such as depicted in *Illustration 41*, below, from which we highlight the order for which we want to generate an ASN, and choose “Order Shipments” from the “View” section of the “Actions” menu.

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Date	Order #	Ack #	Ack Date	ShippingDueDate	DeliveryDueDate	ShipDate	DeliveryDate	Buyer	Status	Master SO
1:44AM 05/12/...	ATLSBX-Dec08							GM	Despatched	AtlasBx-2008
4:50PM 16/01/2...	Order-2009-01...			12:00AM 22/01...	12:00AM 26/02...			GM	Ready To Ship	AtlasBx-2008
4:50PM 16/01/2...	Delivery-2009-...			12:00AM 21/01...	12:00AM 12/02...			GM	Ready To Ship	AtlasBx-2008
10:00AM 14/01...	DELJIT 09-01-14			12:00AM 31/01...	11:00PM 30/03/...	10:24AM 14/01...		GM	Despatched	AtlasBx-2008
10:06AM 09/01...	DELJIT090109			12:00AM 13/02...	11:00PM 26/03/...	10:24AM 09/01...		GM	Despatched	AtlasBx-2008
7:35AM 09/01/...	DELJIT091							GM	Ready To Ship	AtlasBx-2008
4:30AM 09/01/...	DELJIT 20090107					4:52AM 09/01/...	6:21AM 09/01/...	GM	Delivered	AtlasBx-2008
11:59PM 08/01/...	DELJITH22							GM	Ready To Ship	AtlasBx-2008
10:19PM 08/01/...	DejiTHZ			12:00AM 15/01...	10:19PM 22/01/...	11:23PM 08/01/...		GM	Despatched	AtlasBx-2008
10:35AM 02/01...	MCPO			12:00AM 06/02...	11:00PM 12/03/...			GM	Pending	MCPO
10:46AM 17/12...	DELJIT 10			12:00AM 11/01...	12:00AM 28/02...	11:11AM 17/12...		GM	Despatched	AtlasBx-2008
2:15AM 17/12/...	order1							GM	Pending	AtlasBx-2008
1:29AM 17/12/...	Order T1			12:00AM 17/12...	12:00AM 31/12...	1:36AM 17/12/...		GM	Despatched	AtlasBx-2008
12:30AM 17/12...	DELJIT3							GM	Ready To Ship	AtlasBx-2008
10:23PM 16/12/...	DELJIT1							GM	Pending	AtlasBx-2008
3:14PM 15/12/2...	Order D3					3:40PM 19/12/2...	4:03PM 15/12/2...	GM	Delivered	AtlasBx-2008
2:22PM 15/12/2...	Order D2							GM	Ready To Ship	AtlasBx-2008
1:55AM 11/12/...	Order A3							GM	Ready To Ship	AtlasBx-2008

Illustration 41: Navigation to Sales > Orders and selection of the “Ready To Ship” order. Select “Order Shipments” from the “View” section of “Actions” (on the left).

In this the GM / AtlasBX pilot supply chain, there is only one shipment per goods order. The system responds with this list of one shipment, as depicted in *Illustration 42*, below.

SH-Ref	Trade Lane	Date	Estimated Deli	Pickup	Arrival	Status
11927	AtlasBX Batteri...	2:49AM 11/12/...	2:49AM 06/01/...			Ready

Illustration 42: The Shipment for which an ASN will be generated. Note “Shipping Notice” in the “New” section of the “Actions” Menu

In the screen depicted in the illustration above, we shall select “Shipping Notice” from the “New” section of the “Actions” menu. The system responds with the shipment details, as depicted in *Illustration 43*, below. Note that in that screen, the field “ConsignorAssignedID” is provided with a number automatically. This reference number is commonly referred to as the shipper ID (SID). The “Status” field of the ASN is “Add” meaning that we are creating a new ASN. If the intended ship date

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provided is not accurate, it may be changed from the screen depicted in the illustration.

TRADEMERIT | Welcome AtlasBX User - AtlasBX

Home > Sales > Orders > Order A3

Date: Thu Dec 11 01:55:07 GMT-0500 2008 Order #: Order A3 Buyer: GM Master SO: AtlasBx-2008

Order (Deli... Master Ord... Items Invoices Shipments Goods

Actions
No actions currently available

Configuration

CLOSE MENU

* ▼ Summary

Issuer * AtlasBX

IssueDate * 2009-01-22 16:14

ConsignorAssignedID * 11927

ForwarderAssignedID

Status * Add ▼

TransportContractNumber

OrderNumber * Order A3 ▼

OrderAcknowledgement...

InvoiceNumber

ShipDate * 2009-01-22 16:14

EstimatedDeliveryDate

AdditionalNotes

* ► Terms Of Delivery - Delivery Terms: FCA

*Illustration 43: The Summary focus area of the Shipment.
Note “ConsignorAssignedID,” “Status,” and “ShipDate.”*

The second key item of information provided in the ASN (the first being the ship date) is the container number. This is entered by scrolling down from the screen currently present (the one in *Illustration 43*) to the “Equipment” section of the shipment. From there, we shall select “Add Item” (See *Illustration 44*, below).

▼ Equipment Add Item

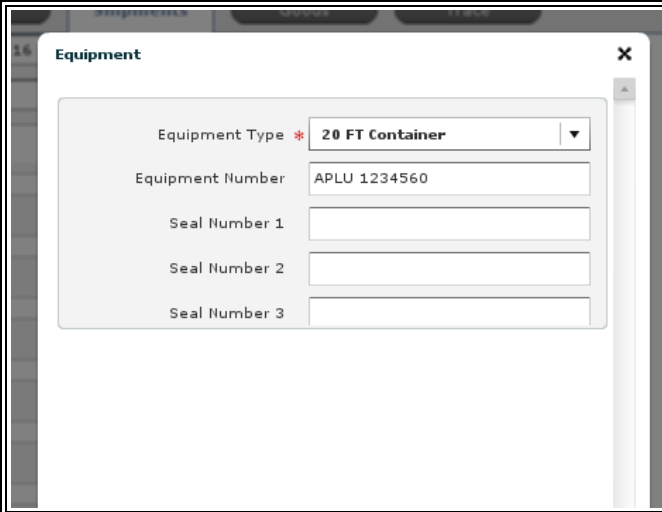
Equipment Index	Equipment Type	Equipment Number

*Illustration 44: The Equipment focus area of the Shipment.
We will use “Add Item” to identify the container number*

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When “Add Item” is selected, the system responds with a dialog, as depicted in *Illustration 45*. From that dialog, specify the container type and container number. Select the “Save” button at the bottom of the dialog. The list of equipment, as was depicted in *Illustration 44*, will be updated to show the container information entered from the dialog.

Select “Submit” from the shipment detail screen to complete the ASN.



The screenshot shows a dialog box titled "Equipment" with a close button (X) in the top right corner. Inside the dialog, there are five input fields arranged vertically. The first field is labeled "Equipment Type" with a red asterisk and a dropdown arrow, showing "20 FT Container". The second field is labeled "Equipment Number" and contains the text "APLU 1234560". The third, fourth, and fifth fields are labeled "Seal Number 1", "Seal Number 2", and "Seal Number 3" respectively, and are currently empty.

Illustration 45: Specification of the container size and number

6.4 Preparation of the Invoice – INVOIC

Current Process Overview

Atlas BX generates a paper Commercial Invoice that accompanies the shipment and is emailed or faxed to the material manager and freight forwarder. The freight forwarder faxes or emails a copy to the customs broker.

Pilot Process Overview

Atlas BX will access the TradeMerit web tool, locate the shipment, add its invoice number and review the PDF version of the eInvoice that is produced automatically from information that was supplied. The eInvoice in PDF format is now available to any authorized party to view or print. The PDF file so produced should be reviewed by Atlas BX for correctness and attached as a file (see Section Error: Reference source not found for the a description of the file attachment procedure) so that it is readily available as part of the entry package used by the customs broker. Note: The TradeMerit software offers the functionality to generate the EDIFACT INVOIC message. However, for the Pilot Exercise1 we will only use the PDF eDocument and the generation of a paper Invoice from it, as needed.

The details of the eInvoice process are described below.

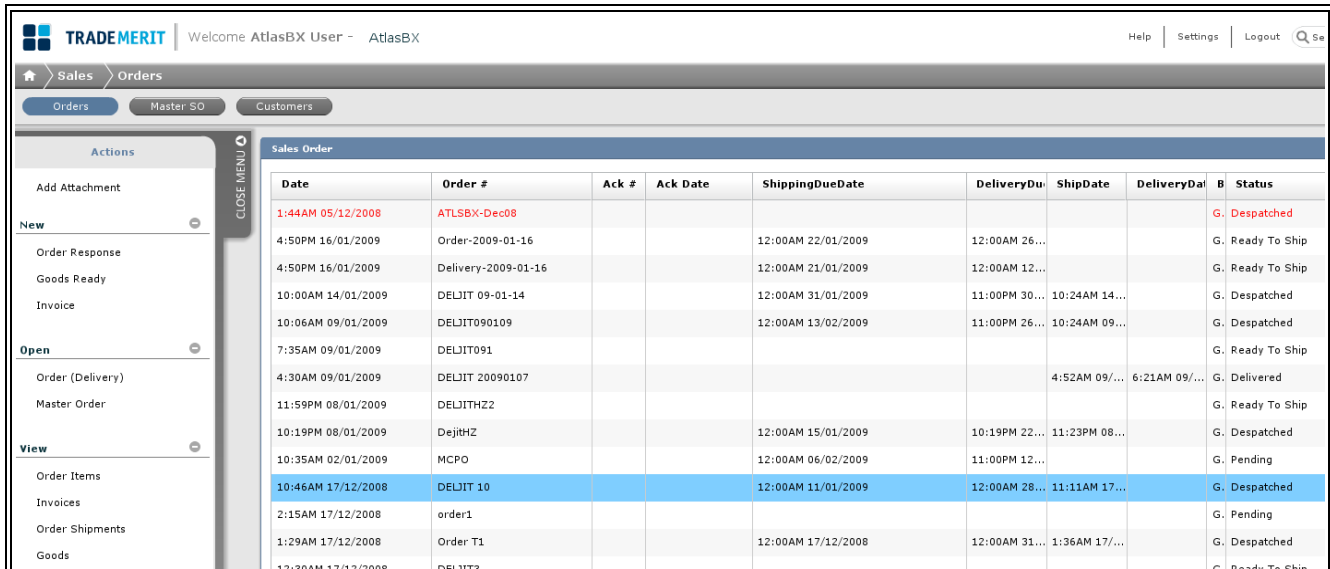
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6.4.1 Invoice Review – Step 1 : Atlas BX Logs In, Navigates to Orders

This procedure is identical with that discussed in Sections 6.1.1 and 6.1.2 starting on page 26, above.

6.4.2 Invoice Review – Step 2 : Select Order, View Order Shipments

Once you have navigated to Sales > Orders, you can select the order on which you wish to view the eDocument invoice. From the screen depicted in Illustration 46, below, you can highlight a despatched order and select “Order Shipments” from the “View” section of the “Actions” menu.



Date	Order #	Ack #	Ack Date	ShippingDueDate	DeliveryDu	ShipDate	DeliveryDate	Status
1:44AM 05/12/2008	ATLSBX-Dec08							G. Despatched
4:50PM 16/01/2009	Order-2009-01-16			12:00AM 22/01/2009	12:00AM 26...			G. Ready To Ship
4:50PM 16/01/2009	Delivery-2009-01-16			12:00AM 21/01/2009	12:00AM 12...			G. Ready To Ship
10:00AM 14/01/2009	DELIT 09-01-14			12:00AM 31/01/2009	11:00PM 30...	10:24AM 14...		G. Despatched
10:06AM 09/01/2009	DELIT090109			12:00AM 13/02/2009	11:00PM 26...	10:24AM 09...		G. Despatched
7:35AM 09/01/2009	DELIT091							G. Ready To Ship
4:30AM 09/01/2009	DELIT 20090107					4:52AM 09/...	6:21AM 09/...	G. Delivered
11:59PM 08/01/2009	DELITH22							G. Ready To Ship
10:19PM 08/01/2009	DejthZ			12:00AM 15/01/2009	10:19PM 22...	11:23PM 08...		G. Despatched
10:35AM 02/01/2009	MCPO			12:00AM 06/02/2009	11:00PM 12...			G. Pending
10:46AM 17/12/2008	DELIT 10			12:00AM 11/01/2009	12:00AM 28...	11:11AM 17...		G. Despatched
2:15AM 17/12/2008	order1							G. Pending
1:29AM 17/12/2008	Order T1			12:00AM 17/12/2008	12:00AM 31...	1:36AM 17/...		G. Despatched
10:30AM 17/12/2008	DELIT10							G. Ready To Ship

Illustration 46: Navigation to Sales > Orders allows Action "View" "Order Shipments" on an order of status "Despatched"

6.4.3 Invoice Review – Step 3 : Produce On-demand invoice

The system will respond to the selection of “Order Shipments” with a screen similar to that depicted in Illustration 47, below.

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[illegible]

Illustration 47: A Shipment on which the Action “Open eInvoice (PDF)” is available

If your web browser is configured to view .pdf files, the selection of “eInvoice (PDF)” will typically open the .pdf file in a new tab of the browser. If your browser is not so configured, the browser will typically ask you whether or not you want to download the .pdf file.

The .pdf produces similar to that depicted in Illustration 1, below.

COMMERCIAL INVOICE					
Seller (name, address, tax reference) AtlasBX 12 plant Seoul KR		Invoice Number Invoice 10			
		Invoice date (yyyy-mm-dd) 2008-12-17		Seller's reference 12221	
		Buyer's reference DELJIT 10		Other Reference	
Consignee (name, address, tax reference) GM 1 main st. Kansas City , Missouri , 11111 US		Buyer (name, address, tax reference) GM 1 main st. Kansas City , Missouri , 11111 US			
Other Party (name, address, tax reference)		Unique Consignment Reference			
		Country of Origin KR	ISO Code KR	Country of Destination US	ISO Code US
		Terms of delivery FCA		Relevant Location Incheon KRICH , KR	
Transport mode and means		Port of Loading UN/LOCODE			
Port of Discharge UN/LOCODE		Final Place Of Delivery UN/LOCODE		Terms Of Payment Transaction currency	
Shipping Marks; Transport Unit ID 40		No. and Kind of Packages; Shipping Description of Goods 40		Commodity Code 14222244	
				Total Gross Weight (kg) Total Cube (m3)	

*Illustration 48: A eDocument Invoice produced by the TradeMerit System.
In the Pilot, the content will be more realistic than that depicted here.*

6.4.4 Invoice Review – Step 4 : Attach .pdf eInvoice file to Shipment

The procedure for attaching this file to the shipment is identical with that described in Section Error: Reference source not found.

6.5 Preparation of the Packing List

Current Process Overview

Atlas BX generates a packing list. A paper copy of this document accompanies the goods. An electronic copy is emailed or faxed to the material manager and freight forwarder. The freight forwarder forwards a copy to the customs broker.

Pilot Process Overview

As above, Atlas BX will generate their usual packing list. A paper copy of this document accompanies the goods. An electronic copy will be associated with the shipment through an uploading process to the TradeMerit system. The packing list will thereby be available to view or print by any authorized party. Note that in a later phase of deployment, the TradeMerit system will be capable of generating from shipment information an eDocument packing list, much as this pilot demonstrates now for the generation of an eDocument invoice.

The details of the process of uploading is identical to that of other files and is covered in the *Section, 6.2*.

7 DHL / EXEL Role Activities

DHL/EXEL's role is depicted in the DHL/EXEL (Freight Forwarder) swim lane of *Illustration 7*.

It consists of the activities of preparing and sending the Booking Request IFTMBF and Shipping Instructions IFTMIN to the ocean carrier. And the preparation and sending of the Container Manifest Pre-Alert Document. These are each discussed in turn below.

7.1 Preparation of the Ocean Container Booking - IFTMBF

Current Process Overview

DHL/EXEL will perform normal booking with APL for each Atlas BX container shipment. APL as ocean carrier will receive via normal channels.

Pilot Process Overview

For MOSS shipments, DHL/EXEL as the Freight Forwarder will copy IFTMBF to GM utilizing GM SCAC code GNMC with a TradeMerit mailbox. TradeMerit will reconcile against shipment system data and provide alert only if a discrepancy exists. TradeMerit will accept Booking Request information into the TradeMerit system.

Or;

For MOSS shipments, DHL/EXEL as the Freight Forwarder will access TradeMerit MOSS web tool locate shipment and complete booking via TradeMerit MOSS IFTMBF.

7.2 Preparation of the Ocean Shipping Instructions - IFTMIN

Current Process Overview

The freight forwarder, DHL/EXEL, sends shipping instructions (an IFTMIN message) to the ocean carrier, APL, using its own tools and communication channel.

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Pilot Process Overview

DHL/EXEL will provide a copy of the IFTMIN generated as above to the TradeMerit system using an API to be defined. The TradeMerit system will reconcile the message against order data and provide an alert if a discrepancy exists. There is no user involvement with the TradeMerit system in performing this task – it is achieved by configuration of the freight forwarder and TradeMerit systems, and by existing processes at the freight forwarder used to produce the IFTMIN.

Or;

For MOSS shipments, DHL/EXEL as the Freight Forwarder will access TradeMerit MOSS web tool locate shipment and complete ocean shipping instructions via TradeMerit MOSS IFTMIN.

7.3 Preparation of Container Manifest Pre-alert Document:

Current Process Overview

The freight forwarder, DHL/EXEL, creates a Container Manifest Pre-alert Document for each container shipment. This document is similar in form and content to an ocean manifest page. Freight Forwarder sends this via email to various parties including GM and the Customs Broker.

Pilot Process Overview

As above, the freight forwarder DHL/EXEL creates a Container Manifest Pre-alert Document for each container shipment. The freight forwarder accesses the TradeMerit system and images this document(s) into the TradeMerit system. The document is available for any authorized party, e.g. GM, Custom Broker, to view and or print.

The procedure for attaching this document is identical with that of attaching other documents. The procedure is described in Section Error: Reference source not found, page Error: Reference source not found.

8 APL Role Activities

The responsibilities of APL are depicted in the Ocean Carrier swim lane of *Illustration 7*. APL prepares and sends the IFTMBC, IFTMCS, and IFTMAN, as well as the PDF copies of the Ocean Bill and Arrival Notice. APL also prepares and submits the 24-hour manifest to CBP and sends various ANSI X12 315 status messages for in- and out-gating events at all ports, including “departed on ship” and domestic inland transportation movement via rail. These are each discussed in turn below.

Note that there are no operational (“daily”) tasks involved of any of the APL role responsibilities. The Pilot's goals are achieved through the configuration of the ocean carrier and TradeMerit systems.

8.1 Preparation of the Booking Confirmation - IFTMBC

Current Process Overview

APL prepares and transmits to the freight forwarder, DHL/EXEL, a booking confirmation (IFTMBC).

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Pilot process:

APL will prepare and transmit a booking confirmation as above, and additionally send a copy to a mailbox on the TradeMerit system. AS2, possibly using ANSI X12 301. We will coordinate exchange of certificates, etc. in the coming days. Estimate of completion date will be made after detailed study. Tarek / Semay.Mishra@apl.com.

8.2 Preparation of the Ocean Bill of Lading - IFTMCS

Current Process Overview

APL prepares and transmits to the freight forwarder, DHL/EXEL, the Ocean Bill of Lading booking (IFTMCS).

APL creates a PDF copy of a bill that may serve multiple purposes, e.g. Non-Negotiable Sea Waybill. It emails or faxes this to the freight forwarder.

Pilot process:

APL will prepare and transmit to the freight forwarder the IFTMCS and PDF bills as above, and additionally will send a copy to a mailbox on the TradeMerit system. AS2.

8.3 Preparation of the Arrival Notice - IFTMAN

Current Process Overview

APL prepares and transmits to the freight forwarder the arrival notice (IFTMAN).

APL creates a PDF copy of the arrival notice, which may also include freight charges. It emails or faxes this to the freight forwarder, DHL/EXEL.

Pilot process:

APL will prepare and transmit the arrival notice (IFTMAN) and PDF copy as above, and additionally will send a copy to a mailbox on the TradeMerit system.

8.4 Preparation of the 309 Customs Manifest

Current Process

APL prepares and transmits to CBP the 309 Ocean Manifest. In some cases, APL also sends this to the destination port authority.

Pilot Process Overview

The process remains unchanged.

8.5 Preparation of 315 Status Messages

Current Process

APL prepares and transmits to the freight forwarder ANSI X12 315 status messages. The freight forwarder, in turn, forwards these to GM's material manager. The 315 messages concern in-gate at foreign port of lading, departed on ship, arrival at destination port and out-gate at destination port.

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Pilot Process Overview

APL prepares and transmits to the freight forwarder X12 315 messages as above, but additionally transmits these messages to a mailbox on the TradeMerit system. The collection of milestones reported in the pilot is expanded to include CBP intra-port status messages for Customs hold and release, and U.S. domestic rail movements of the Pilot's port-to-door container movements. The milestone reports reflected in these messages are incorporated into the TradeMerit system, where they provide to the stakeholders visibility into the shipment.

8.6 Customs Release / Hold Response

Current Process Overview

The ocean carrier receives a CAMIR response message from US Customs.

Pilot Process Overview

As above, the ocean carrier receives a CAMIR response message from US Customs. The TradeMerit system will be made a “secondary notify” party of this message. In processing this message the TradeMerit system will advance the state of the shipment (if goods are released) or alert the customer, freight forwarder and supplier (if goods are held).

9 Customs Broker (CEVA / Eagle) Role Activities

CEVA/Eagle participates in the pilot as the customs broker. Its role is depicted in the “CEVA Eagle Customs Broker” swim lane of *Illustration 7*. The customs broker participates in the activities of preparing and sending the Customs Entry to effect Customs Clearance of the goods.

9.1 Preparation of the Customs Entry

Current Process Overview

The customs broker prepares a customs entry filing and submits it to Customs (CBP) via the ABI (automated broker interface). To perform this task, the customs broker requires paper copies of the invoice, bill of lading, arrival notice and manifest (page). The customs broker also receives additional documentation associated with the entry filing, such as Other Agency documents. These documents, received by the customs broker by a myriad of ways (including email, fax, mail and courier) may be outside the scope of MOSS.

Pilot Process Overview

The customs broker role has, through the TradeMerit web tool, visibility into all information equivalent to MOSS-conforming DESADV, INVOIC, IFTMCS, and IFTMAN messages. The customs broker also has access to documents (.pdf and image formats) attached to the shipment through the TradeMerit web tool. These shall include the invoice, arrival notice, ocean bill of lading, manifest page(s), certificate of origin, hazardous goods certificates, and packing list.

9.2 Entry Filing Response

Current Process

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As describe above, (Section 9.1) the customs broker transmits entry information to CBP. In response to this communication, the customs broker receives a CATAIR response message.

Pilot Process Overview

As above, the customs broker receives a CATAIR response message from US Customs. The TradeMerit system will be made a “secondary notify” party of this message. In processing this message the TradeMerit system will advance the state of the shipment (on successful entry) or alert the customer, customs broker and supplier (otherwise).

10 Material Manager Roles

For this MOSS Pilot exercise, all roles of the material manager are performed under GM login, and have been discussed above.

11 Other Stakeholder Roles

Consolidation Center

Exercise 1 – not applicable for this KR-US lane, will be in Pilot Exercise 2 DE-US Trade Lane

Deconsolidation Center

Exercise 1 - not applicable for this KR-US lane, will be in Pilot Exercise 2 DE-US Trade Lane

Inland Foreign Carrier

Optional for Pilot Exercise 2

Domestic Inland Carrier

Truck - Optional for Pilot Exercise 2

Railroad - Optional for Pilot Exercise 2

12 Pilot Documents

MOSS is developing recommendations for use of both a Global eInvoice and Global ePackList. Both of these recommendations will be based upon the UNEDocs platform; United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT). We also fully understand that the current iteration of UNEDocs may not meet our requirements from both B2B and B2G perspectives. MOSS also recognizes that automotive and automotive related shipments may have unique requirements. Thus, we will recommend an “Automotive Documents Subset” to the UNEDoc platform. By developing standardized eForms unique to automotive and harmonizing all data used in our global supply chains via the MOSS/NIST Data Matrix (<http://syseng.nist.gov/moss>), we can now ensure a stable communication medium within standard form requirements that meet all B2B and B2G requirements.

Noteworthy is that all MOSS recommendations are based upon the UNTDED/ISO 7372 United Nations Trade Data Elements Directory. And all MOSS data requirements with EDI paths may be found at the NIST/MOSS website: <http://syseng.nist.gov/moss> - under repository see Content/Path/Pilot/data-matrix.xls.

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13 MOSS Pilot Contact Information

Stakeholder Role	Name	Address	Contact (primary)	Contact (secondary)
Supplier (also is the SF, MF, SE)	Atlas BX Co., LTD (AKA Korean Storage Battery Company) DUNS 688308027	11F Taeseok Bldg. 275 -5 Yangjae-2Dong, Seocho-gu, Seoul, Korea	Joshua shout000@atlasbx.co.kr 82-2-3498-0221	 P 82-2-3498-0114 F 82-2-579-1050-1
Ship-To	GM SPO Kansas City Battery Distribution DUNS 000142612	Kansas City WMS BDS 1491 N. Universal Kansas, MO 64129 DUNS 000142612	Craig Kersten craig.kersten@menloworldwide.com Phone: 816-204-3900 Fax: 816-204-3890	
3PL / MM	CEVA Logistics	Global Material Management Asia Pacific Control Tower 15 Changi South Street 2 Singapore 486068 Singapore	Jason Zhao Global Materials Manager Singapore Jason.Zhao@cevalogistics.com (P) +65-65770-515 (F) +65 63424497	Isa Mohd Mohd.Isa@cevalogistics.com (P) +65-9766-0314
Freight Forwarder	DHL EXEL (formerly EXEL)	DHL/EXEL Logistics (US) Seven Mile	Kristy Bell Operations Manager / GMIO kristy.bell@us.exel.com	

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		<p>Crossing</p> <p>38701 Seven Mile</p> <p>Suite 345</p> <p>Livonia, MI 48152</p> <p>DHL/EXEL Logistics (Korea) Ltd.</p> <p>6th Floor</p> <p>170-9 Samsung-Dong</p> <p>Kangnam-ku</p> <p>Seoul, Korea</p>	<p>(P) 734-853-5806</p> <p>(C) 734-637-8092</p> <p>Denny Lee</p> <p>+82-2-2185-3563</p>	
Ocean Carrier	APL		<p>Origin contact: (APL KR)</p> <p>sunkyung kim</p> <p>sunkyung_kim@apl.com</p> <p>82 2 772 0303</p> <p>Destination contact:</p> <p>Jim Lemon</p> <p>Director, Global Sales</p> <p>APL Limited</p> <p>Jim_Lemon@apl.com</p> <p>Ph: 248-360-9803</p> <p>Fax: 248-360-9806</p> <p>Cell: 734-604-6700</p>	
Customs Broker	CEVA/Eagle Global	10049 Harrison Suite 100	<p>Glennnda Harding</p> <p>GM Import Supervisor</p> <p>Glennnda.Harding</p>	

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	Logistics (formerly Eagle)	Romulus, MI 48174	@cevalogistics.com (P) 734-229-1732 (F) 734-229-1712	
MOSS Application Provider	TradeMerit		Tarek El- Gillani Systems Engineer (P) 613-237-5422 x115 tarek@trademerit.com	
Buyer Logistics			Lynn Sylvester GMNA LSC & origin EU Lead Lynn.Sylvester@hotmail.com Lynn.sylvester@gm.com (P) +1-313-213-0740	Robert Stewart GM SPO Supplier Manager Robert.stewart@gm.com (P) 905-644-3017 (F) 905-644-6122
General Motors Tax Staff			Gil Duhn Customs Manager GM Tax Staff Gil.duhn@gm.com (P)+1.313.665.3934	
MOSS Team	Global Commerce Systems, Inc.	607 Herndon Pkwy., Suite 205 Herndon, Va 20170	Michael Comerford MOSS Co-Chair (GM) Michael.comerford@usgcs.com +1-716.560.8316	
NIST			Peter Denno Peter.denno@nist.gov (P) +1-301-975-3595	
Korean Port KR Customs Broker	KT-NET			
AIAG	AIAG		Tim Fowler Supply Chain Business Unit Director tfowler@aiag.org	

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			(P) 248.213.4651 (F) 248.358.3253	
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14 Pilot Event Reporting: Order Management / Inventory Management

Improved visibility is a key goal the MOSS project. Milestones shall be reported through messaging as described in the MOSS Activity Diagrams.

Business Process Significant Dates and Times (Milestones)

Event Date	Acronym	Source
Requested Ship Date		DELJIT
Estimated Ship Date		TradeMerit System
Actual Shipped Date	SFS PAS	DESADV - Shipped from Supplier DESADV (note we named this Shipped from Supplier SFS and retain PAS for a 214 from Trucker)
Requested Delivery Date		DELJIT
Estimated Delivery Date		TradeMerit System
Arrived Port of Departure	APD	315 from Ocean Carrier In-gate
Departed on Ship	DOS	315 from Ocean Carrier
Estimated VSL Arrival Date		TradeMerit System
Arrived Port of Arrival	APA	315 from Ocean Carrier
Out-gate Port of Arrival	OPA	315 from Ocean Carrier
Hold Import Customs	HIC	2 nd Notify Party to CATAIR and CAMIR
Cleared Import Customs	CIC	2 nd Notify Party to CATAIR and CAMIR
Domestic Intermediary Movements	DIM	315 from Ocean carrier (rec'd by OC from Rail)
Delivered to Destination	DTD	RECADV from KC GM SPO Whse

MOSS Pilot Exercise 2 – will include all event reporting from Exercise 1 and be expanded in Exercise 2 to include:

Arrived Consolidation Center	ACC	
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Received Consolidation Center	RCC	
Loaded Consolidation Center	LOC	
Departed Consolidation Center	DCC	
Picked Up by Carrier at Port	PCP	214 from Truck
Arrived Deconsolidation Center	ADC	
Received Deconsolidation Center	RDC	
Loaded Deconsolidation Center	LDC	
Picked Up from Deconsolidation Center	PDC	

15 Security and Access Control

15.1 Overview

Maintaining the appropriate confidentiality of information used to manage the supply chain was recognized early in the MOSS project as a key requirement. The most effective solution was found to be role-based access control (RBAC). In role-based access control, access to a unit of information is decided by reference to the business role played by the party seeking the access. In RBAC, the system can be configured such that, for example, a Customer role can be granted the right to view and define pricing information, and the Freight Forwarder role could be restricted from viewing this information. This business-oriented notion of control is paired with a technological one, in which the party authenticates to a user id associated with the business role (e.g. you log in to the role Customer or Freight Forwarder, etc).

Our assessment of the TradeMerit software is that it provides role-based access control. The details of its implementation, and the wider issues of information security are discussed in the following section.

15.2 TradeMerit Provisions for Security and Access Control

The TradeMerit solution employs established security standards and protocol in order to secure organization data during transmission over the network. All sensitive data is transmitted over a secure channel created between the user's browser and TradeMerit data center. TradeMerit data center is itself a redundant and physically secure site which employs network security components to prohibit public access to data.

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TradeMerit solution implements Access Control on two layers:

- First, the logged on user's organization must be authorized to access the information. The authorization is granted based on the process rules as described in the Shipping Plan, Master Order, and other documents. Various level of authorization may be granted include read-only or read-write access.
- Second, within a given Organization, the user Access Rights are used to determine if the logged on user is authorized to access the requested information.

As show below, user's with Administration rights can set the various user's access rights as applicable to their organization.



16 Pilot Evaluation Procedures

Pilot Goods volume : Atlas BX 7/07 – 06/08 (12 months) 4,896 shipments to Discharge Ports 2704 and 3001,

Atlas BX – GM SPO Kansas City MO lane provides a consistent 3-5 containers each week. This should provide a stable environment in which to demonstrate the TradeMerit / MOSS solution and enable

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stakeholders and independent evaluators¹ to observe the performance and behavior and report.

Software Problem Tracking TradeMerit provides a case management system which we intend to use to track all issues/concerns encountered during the pilot. Cases will be categorized to indicate Business Process issues versus Technical problems. Users are required to create cases as soon as a problem is detected or if any of the pilot shipment can not be implemented using the new process. For each case, weekly reports will be used to show case category, time opened, current status (open/closed), turnaround time, and any open actions. These reports will be reviewed by the stackholder on regular basis during the pilot.

Duration of the Pilot Based upon 3-5 containers per week, we plan on conducting this Pilot exercise for 6 weeks. This will enable sufficient volume to evaluate the TradeMerit MOSS system including problem identification, problem resolution, and collection of trading partner participant comments. All suggestions for system improvements will be collected and evaluated. System refinements will be made on an on-going basis.

Area	Requirement	Effectiveness
Efficiency Toward Goals	Eliminate re-keying	
	Enable Data Sharing - syntax neutral	
	Document generation on demand MOSS eDocs for Invoice and Pack List	
	Provides Immediate notification of deficient documents and procedure for correction	
	Data transfer based upon open standards	
	Captures all documents in either PDF or Image	
	Supports traditional EDI, XML, etc	

¹NIST has been an active participant in the MOSS project since its inception. NIST has interest in assessing the effectiveness of the MOSS recommended practice, including the effectiveness of its method of exposition, its implementation in business processes and software tools, and its methods of conformance assessment. At the conclusion of the Pilot exercises, NIST will provide a report describing the results of its involvement in the project. In the meantime, NIST will continue to work with the AIAG team to ensure that the Pilot exercises are successful.

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	Complies with international standards	
Event Reporting	Provide event reporting real time	
	Provide for corroborated event reporting	
	Provide timely notification of delays	
	Provide an analytical tool for each actor, event	
	Capture all exception processing and premium transportation costs	
	Provide End to End Visibility	
	Provide alerts for shipments delayed	
	Provides predictive analysis into delays	
Security	Provides ability to share data, add data and where authorized modify data created by others (layer security). Limit users access to specific data	
	Layer security to Enter (Create) Data, Receive Data, View Data, Send Data, and Modify Data.	
	Provides traceability to responsible party / history tracing - what data was modified, how was it changes and by whom and when.	
	Provides different user interface levels	
Other	Ability to capture Notes sections	

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	Minimal down time	
	Redundant / Back-up system	
	Ability to capture pre-defined metrics	
	Ability to readily change mode	
	User friendly interfaces	
	Flexibility, ability to change trading partners easily	
	Multi-language use, translation	
	Electronic updates	
	Cost effective to global scale	
	Overlay to routing schedules	
	Ability to preplan alternate routings	
	Web accessible	
	Enables simultaneous decision making rather than sequential decision making	
	Provides a pre-defined reports	
	Provide ad hoc reports	
	Provides data query function	